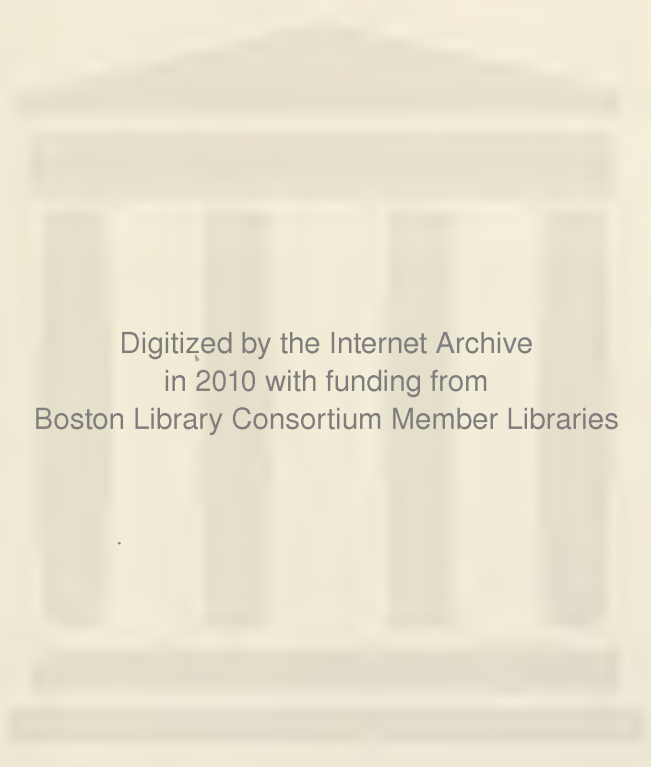


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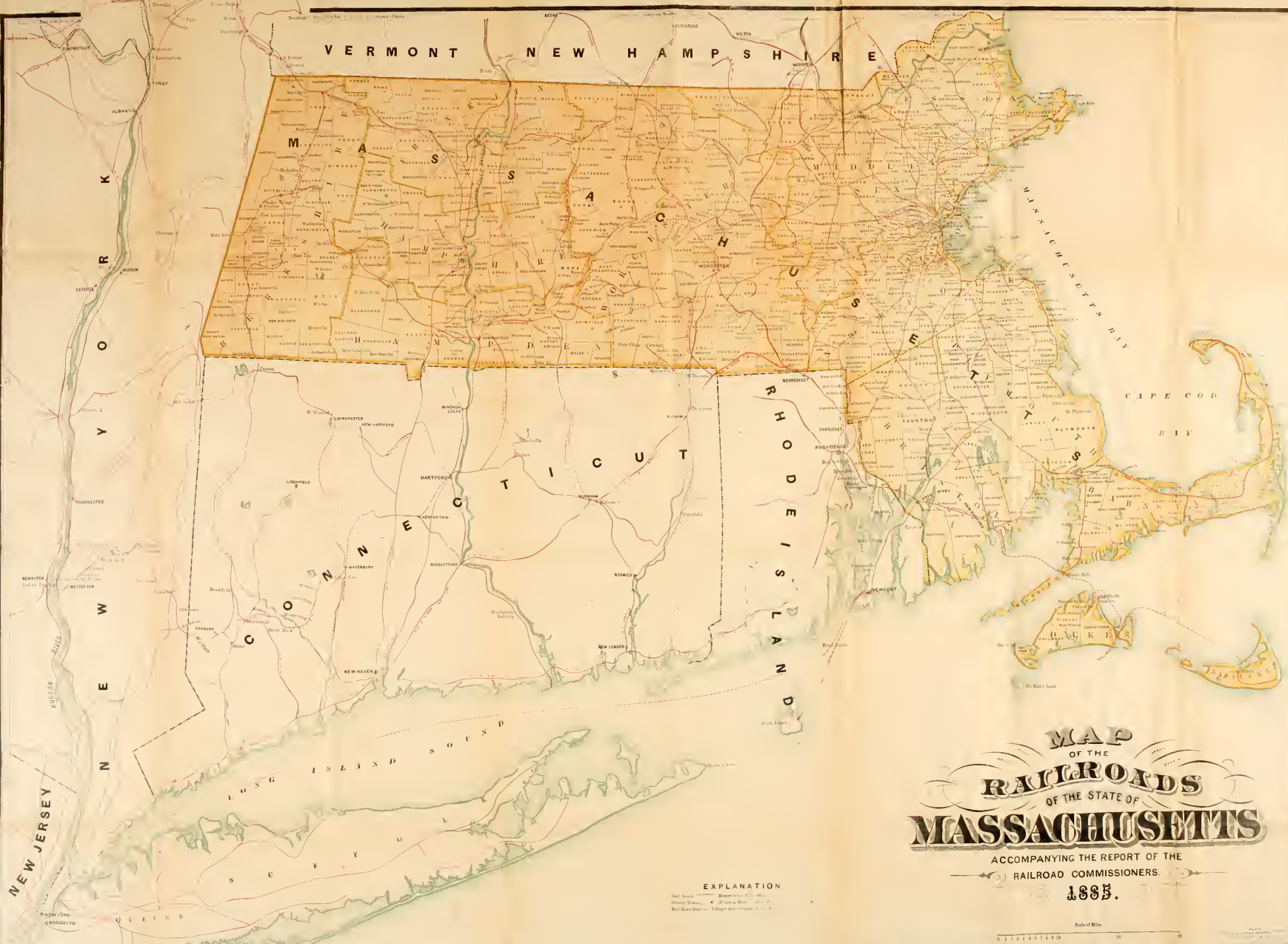


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MAP  
OF THE  
**RAILROADS**  
OF THE STATE OF  
**MASSACHUSETTS**

ACCOMPANYING THE REPORT OF THE  
RAILROAD COMMISSIONERS.

1885.

EXPLANATION

Full line ————— denotes the railroad.  
Dotted line . . . . . denotes the proposed railroad.  
Small circles (•) denote the stations.  
Small squares (■) denote the depots.  
Small triangles (▲) denote the ferry crossings.  
Small diamonds (◆) denote the bridges.  
Small stars (★) denote the wharves.  
Small crosses (✕) denote the railroads.

Scale of Miles  
0 1 2 3 4 5 6 7 8 9 10



SEVENTEENTH ANNUAL REPORT

OF THE

BOARD OF RAILROAD COMMISSIONERS.

JANUARY, 1886.

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BOSTON :

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.

1886.

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1886

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**Part I.**

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**COMMISSIONERS' REPORT.**

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# Commonwealth of Massachusetts.

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The Railroad Commissioners respectfully submit their Seventeenth Annual Report.

## RAILROAD CONSTRUCTION.

During the year ending Sept. 30, 1885, there were constructed the following additional miles of railroad in this State : —

Boston & Lowell	. . . . .	7.630
Old Colony	. . . . .	.750
Nantucket .	. . . . .	.160
		<hr/>
		8.540
And there was a decrease in the number of miles by a re-measure-		
ment on several roads, of	. . . . .	.560
		<hr/>
Additional miles,	. . . . .	7.980

## MILEAGE OF RAILROADS.

The total length of railroads belonging to the corporations making returns to this Board was 2,859.793 miles of main line and branches, of which 977.087 were provided with double track. Last year the total length was 2,851.743 miles, with 941.627 miles of double track; showing an increase of 8.050 of total length, and 35.460 miles of double track. The total length of sidings was 1,203.142 miles, as against 1,165.207; showing an increase of 37.935 miles. The total length of track, considering double track and sidings as so much additional single track, is 5,040.022 miles, as against 4,958.577 of last year; the increase being 81.445 miles. Of the whole amount there are in this State, of main line 1,981.688 miles, of double track 699.639, and of sidings 855.300 miles, being a

total of 3,536.627, as against 3,473.990 miles of last year; showing an increase of track in this State of 62.637 miles.

### COST OF ROADS.

The average cost of standard-gauge roads is returned at \$61,963.43 per mile; the cost of equipment per mile operated averages \$6,087.15, — making the average cost of a standard-gauge road, with equipment, \$68,050.58. The cost of narrow-gauge roads averages \$27,322.04 per mile, and \$6,693.18 per mile additional for equipment.

### NUMBER OF CORPORATIONS.

Returns were received from sixty-three corporations — the same number as last year.

### CAPITAL STOCK AND DEBT.

The aggregate capital stock was \$128,551,658.54, an increase of \$883,268.27, resulting from an increase of the capital stock of the following roads: —

Boston & Lowell . . . . .	\$749,700 00
Old Colony . . . . .	400,000 00
Fitchburg . . . . .	336,500 00
Vermont & Massachusetts . . . . .	143,000 00
N. Y. & B. Inland . . . . .	77,720 00
Boston Winthrop & Shore . . . . .	42,800 00
Central Massachusetts . . . . .	6,726 00
Lowell & Framingham . . . . .	2,100 00

The capital stock of the Boston, Barre & Gardner Company amounting to \$875,277.73 disappears from our accounts (under this name), the company having been consolidated with the Fitchburg.

The net debt of the companies — the gross debt less cash assets — amounts to \$73,706,622.04, a decrease of \$732,851.71. The cash assets of all the railroad companies of the State have increased by the amount of \$2,762,553.02. The returns for the last seven years are as follows: —

YEARS.	Stock.	Net Debt.
1879, . . . . .	\$118,390,938 88	\$55,755,418 06
1880, . . . . .	118,738,871 58	59,172,520 25
1881, . . . . .	122,155,614 12	64,850,890 76
1882, . . . . .	122,976,262 26	71,913,806 00
1883, . . . . .	122,367,572 27	72,933,290 93
1884, . . . . .	127,668,390 27	74,439,473 75
1885, . . . . .	128,551,658 54	73,706,622 04

## GROSS INCOME.

The total gross income of these corporations for the year is \$44,623,350.35, an increase of \$1,504,047.65; being an increase of 3.5 per cent.

The following table gives a comparison for seven years : —

YEARS.	Gross Income.	Increase from Previous Year.	Per cent. of Increase.
1879, . . . . .	\$30,312,964 54	—	—
1880, . . . . .	35,140,374 77	\$4,827,410 23	15.5
1881, . . . . .	37,764,395 83	2,624,021 06	7.5
1882, . . . . .	40,846,370 10	3,081,974 27	8.1
1883, . . . . .	43,380,387 63	2,534,017 53	6.2
1884, . . . . .	43,119,302 70	261,084 93*	0.6*
1885, . . . . .	44,623,350 35	1,504,047 65	3.5

\* Decrease.

The total expenses — including rents paid — of all the corporations amounted to \$32,504,375.47, an increase of \$433,690.96. The net income was \$12,118,974 88, being an increase of \$1,070,356.69. The passenger earnings were \$21,549,369.27, an increase of \$342,168.85 over the year 1884, when they amounted to \$21,207,200.42. The freight earnings were \$20,192,971.72, a decrease of \$56,805.16 from those of last year, which amounted to \$20,249,776.88.

The local passenger earnings were \$14,454,857.39, an increase of \$390,939.61 over the figures of last year, which were \$14,063,917.78. The through passenger earnings were \$5,078,966.71, a decrease of \$155,788.33 from the amount for last year, which was \$5,234,755.04. The express, mail, and other



earnings included in total passenger earnings, as given above, amounted to \$2,015,545.17, being an increase of \$107,017.57, this item having been, in 1884, \$1,908,527.60. The local freight earnings were \$9,931,155.95; in 1884 they were \$9,859,079.52, showing an increase of \$72,076.43. Through freight was \$10,192,899.01, against \$10,327,777.47, a decrease of \$134,878.46.

The income from all other sources of the freight department amounted to \$68,916.76, as against \$62,919.89, an increase of \$5,996.87. The following table gives the earnings in strictly railroad business during the past ten years : —

YEARS.	Total Transportation.	Decrease or Increase from Previous Year.	Percentage.
1875-76, . . . . .	\$29,855,800 39	—	—
1876-77, . . . . .	28,931,987 62	\$923,818 87	3.10
1877-78, . . . . .	28,003,236 41	928,751 21	3.21
1878-79, . . . . .	29,152,829 02	1,149,592 61*	4.10*
1879-80, . . . . .	33,661,822 69	4,508,993 67*	15.40*
1880-81, . . . . .	35,936,302 87	2,274,480 18*	6.75*
1881-82, . . . . .	39,094,369 25	3,158,066 38*	8.79*
1882-83, . . . . .	41,635,800 39	2,541,431 14*	6.50*
1883-84, . . . . .	41,456,977 30	178,823 09	0.43
1884-85, . . . . .	41,742,340 99	285,363 69*	0.69*

\* Increase.

The following tables show the passenger and freight earnings for the past ten years, and the comparative amount of passenger and freight mileage during the same period : —

YEARS.	Passenger Earnings.	Freight Earnings.
1875-76, . . . . .	\$14,531,719 36	\$14,086,146 69
1876-77, . . . . .	13,489,208 95	14,234,677 72
1877-78, . . . . .	12,949,970 76	13,782,724 66
1878-79, . . . . .	13,035,047 44	14,813,337 69
1879-80, . . . . .	14,532,368 06	17,741,746 39
1880-81, . . . . .	17,328,495 48	18,607,807 39
1881-82, . . . . .	19,567,274 71	19,527,094 54
1882-83, . . . . .	20,602,289 13	21,033,511 26
1883-84, . . . . .	21,207,200 42	20,249,776 88
1884-85, . . . . .	21,549,369 27	20,192,971 72

*Passenger and Freight Mileage.*

YEARS.	Total Passenger Mileage.	Total Freight Mileage.
1875-76, . . . . .	639,592,115	628,577,176
1876-77, . . . . .	605,544,855	684,810,604
1877-78, . . . . .	593,060,781	715,480,187
1878-79, . . . . .	616,871,131	806,064,933
1879-80, . . . . .	708,645,422	959,429,750
1880-81, . . . . .	788,422,761	1,080,802,796
1881-82, . . . . .	892,321,207	1,130,070,652
1882-83, . . . . .	943,245,658	1,220,824,418
1883-84, . . . . .	1,007,136,376	1,229,368,472
1884-85, . . . . .	1,041,628,073	1,266,160,455

The increase of passenger mileage — or passengers carried one mile — for the year amounts to 34,491,697. The increase of freight mileage, or tons of freight carried one mile, amounts to 36,791,983. The total number of passengers carried was 69,603,700, showing an increase of 3,086,435 over the previous year. The whole number of tons of freight carried was 20,577,096, as against 20,273,920; showing an increase of 303,176 tons.

## EARNINGS PER MILE OF ROAD.

The average sum earned on each mile of main track and branch operated was \$11,206.00; or, computing double track as additional single track, the average per mile was \$8,887.57. The average transportation earnings per mile, on the eight roads of standard gauge terminating in Boston, was \$11,526.53, being an increase of \$257.36 per mile.

## COST OF OPERATING.

The following table shows the cost of operating the roads during the past ten years, and the percentage of operating expenses, not including taxes, as compared with gross receipts: —

YEARS	Cost of operating per Mile of Road.	Percentage of Operating Expenses to Gross Receipts.
1875-76, . . . . .	\$8,836 40	69
1876-77, . . . . .	8,494 18	68
1877-78, . . . . .	7,319 51	69
1878-79, . . . . .	6,576 75	65
1879-80, . . . . .	7,786 00	68
1880-81, . . . . .	8,146 15	68
1881-82, . . . . .	8,603 10	69
1882-83, . . . . .	9,192 56	71
1883-84, . . . . .	8,062 12	66
1884-85, . . . . .	7,460 50	62

## GROSS AND NET INCOME.

The total gross and net income of all the corporations for ten years, and the percentage of gross and net income compared with the permanent investments, were as follows:—

YEARS.	Total Gross Income.	Percentage to Permanent Investments.	Net Income.*	Percentage to Permanent Investments.
1875-76, .	\$31,007,448 32	18.3	\$9,546,820 80	5.6
1876-77, .	30,008,513 74	17.7	9,344,088 38	5.5
1877-78, .	29,053,008 76	17.0	9,232,811 98	5.4
1878-79, .	30,312,964 54	17.5	10,154,013 86	5.8
1879-80, .	35,140,374 77	19.5	11,191,815 53	6.2
1880-81, .	37,764,395 83	19.9	10,701,751 60	5.6
1881-82, .	40,846,370 10	20.5	10,902,202 95	5.5
1882-83, .	43,380,387 63	21.8	10,900,479 92	5.4
1883-84, .	43,119,302 70	20.4	11,048,618 19	5.2
1884-85, .	44,623,350 35	20.8	12,118,974 88	5.7

The net income of 1884-85 was earned by the several corporations in the following proportions as compared with their permanent investments:—

14 companies with	\$8,881,000	permanent investment	had no net income.
14	"	" 41,946,000	" " " 3½ per ct. or less
13	"	" 37,720,000	" " " 3½ to 5½ per cent.
7	"	" 32,402,000	" " " 5½ to 7½ "
9	"	" 54,767,000	" " " 7½ to 9½ "
3	"	" 37,969,000	" " " 9½ per ct. or over.
60 companies†	" \$213,685,000	" " "	" net income‡ of 7.2 per cent.

\* Gross income less total expenses and rents.

† Troy and Greenfield not included.

‡ Rents not deducted.

## DIVIDENDS.

The total amount of dividends paid was \$6,551,704.15, an increase of \$16,649.23 over last year. Of the 63 corporations, 33 paid dividends varying from 2 to 10 per cent. The following table shows the amount paid in dividends by all the corporations for ten years, with the percentage to capital stock, and also the amount of interest paid : —

YEARS.	Amount paid in Dividends.	Percentage to Total Capital Stock.	Interest paid.
1875-76, . . .	\$5,858,509 49	4.95	\$3,704,698 38
1876-77, . . .	5,429,183 31	4.60	3,437,026 53
1877-78, . . .	5,589,927 40	4.68	3,126,925 34
1878-79, . . .	5,264,431 78	4 30	3,172,990 59
1879-80, . . .	5,987,718 64	5.05	3,423,752 25
1880-81, . . .	6,287,866 82	5.15	3,748,292 55
1881-82, . . .	6,271,139 86	5.10	4,291,222 59
1882-83, . . .	6,379,721 10	5.21	4,756,085 23
1883-84, . . .	6,535,054 92	5.12	4,729,328 55
1884-85, . . .	6,551,704 15	5.10	4,767,095 88

## AMOUNT OF BUSINESS.

The annual passenger and freight movement on all the roads, for ten years, appears in the following tables : —

YEARS.	No. of Passengers Carried.	No. of Passengers Carried One Mile.	Average Distance Travelled.
1875-76, . . .	41,133,229	639,592,115	15.55
1876-77, . . .	38,450,823	605,544,855	16.00
1877-78, . . .	37,318,427	593,060,781	15 85
1878-79, . . .	39,217,634	616,871,131	15.73
1879-80, . . .	45,151,152	708,645,422	15 70
1880-81, . . .	49,834,491	788,422,761	15.82
1881-82, . . .	55,868,694	892,321,207	15.97
1882-83, . . .	61,530,747	943,245,658	15 33
1883-84, . . .	66,517,265	1,007,136,376	15.29
1884-85, . . .	69,603,700	1,041,628,073	14.97

YEARS.	Tons Freight Carried.	Tons Freight Carried One Mile.	Average Distance each Ton was Carried.
1875-76, . . . .	11,327,502	628,577,176	55.48
1876-77, . . . .	11,910,663	684,810,604	57.40
1877-78, . . . .	12,186,545	715,480,187	58.65
1878-79, . . . .	14,401,877	806,064,933	56.00
1879-80, . . . .	17,221,567	959,429,750	55.70
1880-81, . . . .	17,971,072	1,080,802,796	60.14
1881-82, . . . .	19,061,164	1,130,070,652	59.29
1882-83, . . . .	20,202,881	1,220,824,418	60.43
1883-84, . . . .	20,273,920	1,229,368,472	60.64
1884-85, . . . .	20,577,096	1,266,160,455	61.53

The miles run by passenger and freight trains, and the total miles run by all trains for the past ten years, were as follows : —

YEARS.	MILES RUN BY —		
	Passenger Trains.	Freight Trains.	All Trains.
1875-76, . . . .	10,439,856	9,464,471	20,605,854
1876-77, . . . .	10,479,546	9,967,200	20,811,041
1877-78, . . . .	10,301,893	9,266,252	21,438,329
1878-79, . . . .	10,792,629	8,974,993	22,755,910
1879-80, . . . .	11,350,716	9,809,975	24,975,392
1880-81, . . . .	12,413,290	10,398,539	27,205,783
1881-82, . . . .	13,636,169	10,598,126	29,052,800
1882-83, . . . .	14,244,658	11,382,154	31,150,823
1883-84, . . . .	15,157,425	11,282,338	32,304,333
1884-85, . . . .	16,212,988	11,722,667	34,168,999

### COST OF RUNNING TRAINS.

The average cost of running trains one mile during this year on all the roads reported, has been \$0.813. The cost (not including taxes) of running each train mile for the past eight years was as follows : —

#### *Cost per Total Train Mile.*

1877-78, . . . .	\$0.884	1881-82, . . . .	\$0.863
1878-79, . . . .	.845	1882-83, . . . .	.949
1879-80, . . . .	.902	1883-84, . . . .	.895
1880-81, . . . .	.810	1884-85, . . . .	.813



The following table shows the cost for five years per total train mile to each of the leading corporations of the State :—

	COST PER TOTAL TRAIN MILE.				
	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
Boston & Albany, . . .	\$0.887	\$0.920	\$1.003	\$0.927	\$0.819
Boston & Lowell, . . .	.886	.867	.830	.781	.650
Boston & Maine, . . .	.879	.923	.964	.900	.805
Boston & Providence, . .	1.066	1.268	1.275	1.220	1.158
Eastern, . . . . .	.806	.867	.838	.818	-
Fitchburg, . . . . .	.859	.890	.887	.800	.748
New York & New England,	.816	.850	.922	.932	.839
Old Colony, . . . . .	.945	1.005	1.008	.879	.863
Connecticut River, . . .	1.051	1.019	.998	.936	.906
New York, New Haven & Hartford, . . . . .	1.059	.983	.981	.968	.898
Providence & Worcester, .	.946	.988	1.026	1.072	.961
Worcester, Nashua & Roch- ester, . . . . .	.839	.902	.912	.841	.779

The cost of certain specified items of train service per total train mile for the last six years is divided as follows :—

	1880.	1881.	1882.	1883.	1884.	1885.
Repairs of road-bed, . .	\$0.109	\$0.117	\$0.125	\$0.133	\$0.122	\$0.118
of bridges, . . . .	.017	.020	.017	.024	.024	.023
of rails, . . . . .	.027	.032	.028	.030	.021	.015
of locomotives, . . .	.056	.057	.061	.066	.060	.054
of passenger cars, . .	.069	.081	.096	.092	.039	.035
of freight cars, . . .	.150	.144	.141	.138	.043	.035
Wages, . . . . .	.270	.271	.279	.287	.283	.268
Oil and waste, . . . .	.010	.010	.011	.011	.010	.008
Fuel, . . . . .	.109	.122	.121	.124	.111	.094
Totals, . . . . .	\$0.817	\$0.854	\$0.879	\$0.905	\$0.713	\$0.650

The earnings for each revenue-train mile, for each passenger-train mile, and for each freight-train mile, on twelve of the principal roads in the State during the past five years, are given in the following tables :—

	EARNINGS PER TOTAL REVENUE-TRAIN MILE.				
	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
Boston & Albany, . . .	\$1.394	\$1.496	\$1.638	\$1.542	\$1.406
Boston & Lowell, . . .	1.677	1.655	1.674	1.451	1.199
Boston & Maine, . . .	1.678	1.697	1.709	1.587	1.541
Boston & Providence, . .	1.712	1.860	1.838	1.749	1.715
Eastern, . . . . .	1.605	1.637	1.648	1.580	-
Fitchburg, . . . . .	1.378	1.451	1.532	1.394	1.324
New York & New England,	1.420	1.485	1.320	1.360	1.466
Old Colony, . . . . .	1.609	1.697	1.668	1.685	1.723
Connecticut River, . . .	1.876	1.821	1.855	2.080	1.691
New York, New Haven & Hartford, . . . . .	2.066	1.878	1.804	1.772	1.767
Providence & Worcester, .	1.918	1.977	2.013	1.832	1.962
Worcester, Nashua & Roch- ester, . . . . .	1.341	1.420	1.440	1.384	1.421

	EARNINGS PER PASSENGER-TRAIN MILE.				
	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
Boston & Albany, . . .	\$1.826	\$1.863	\$1.990	\$1.824	\$1.733
Boston & Lowell, . . .	1.044	.947	1.047	1.071	.954
Boston & Maine, . . .	1.454	1.508	1.513	1.402	1.373
Boston & Providence, . .	1.463	1.601	1.563	1.499	1.471
Eastern, . . . . .	1.417	1.469	1.458	1.420	-
Fitchburg, . . . . .	.984	1.087	1.132	1.011	.965
New York & New England,	.949	1.050	.988	1.018	1.074
Old Colony, . . . . .	1.407	1.517	1.477	1.444	1.415
Connecticut River, . . .	1.286	1.290	1.253	1.593	1.112
New York, New Haven & Hartford, . . . . .	2.033	1.970	1.821	1.835	1.726
Providence & Worcester, .	1.440	1.454	1.555	1.221	1.560
Worcester, Nashua & Roch- ester, . . . . .	1.170	1.128	1.093	1.052	.967

	EARNINGS PER FREIGHT-TRAIN MILE.				
	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
Boston & Albany, . . .	\$1.201	\$1.283	\$1.433	\$1.359	\$1.199
Boston & Lowell, . . .	3.654	3.874	3.547	2.266	1.519
Boston & Maine, . . .	2.205	2.112	2.145	2.029	1.904
Boston & Providence, . .	2.364	2.501	2.579	2.498	2.451
Eastern, . . . . .	1.950	1.940	1.998	1.880	-
Fitchburg, . . . . .	1.732	1.807	1.892	1.768	1.728
New York & New England,	2.281	2.095	1.652	1.729	1.966
Old Colony, . . . . .	1.969	1.999	1.997	2.177	2.450
Connecticut River, . . .	3.017	2.788	3.066	2.639	3.060
New York, New Haven & Hartford, . . . . .	2.119	1.730	1.775	1.670	1.844
Providence & Worcester, .	2.462	2.559	2.513	3.205	2.426
Worcester, Nashua & Roch- ester, . . . . .	1.470	1.681	1.749	1.680	1.890



## FARES AND FREIGHTS.

The four following tables show the average fares on all roads, the average fares and freights for eight years on the leading roads, and the change in average rate of freight on six roads since 1865 : —

*Average Fare on all Roads in the State.*

1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
\$0.0240	\$0.0212	\$0.0224	\$0.0220	\$0.0200	\$0.0201	\$0.0192	\$0.0187

*Average Fares for Six Years.*

	FARES.					
	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Boston & Albany, . . .	2.08	1.97	1.99	2.08	1.91	1.84
Boston & Maine, . . .	2.06	1.99	1.95	1.97	1.90	1.74
Boston & Providence, . .	1.80	1.95	1.96	1.88	1.88	1.84
Old Colony, . . . . .	2.00	2.14	2.00	2.00	1.87	1.70
Boston & Lowell, . . .	1.92	1.88	1.67	1.94	2.12	2.04
Fitchburg, . . . . .	1.89	1.82	1.71	1.77	1.65	1.83
Eastern, . . . . .	1.97	1.93	1.88	1.82	1.72	—
New York & New England,	2.12	2.25	2.09	2.06	2.01	1.93
Connecticut River, . . .	2.59	2.53	2.48	2.36	2.37	2.34
New York, New Haven & Hartford, . . . . .	2.02	1.80	1.81	1.98	1.96	1.94
Providence & Worcester,	2.33	2.24	2.12	2.14	2.12	2.08
Worcester, Nashua & Rochester, . . . . .	2.78	2.69	2.79	2.74	2.74	2.71

*Average Freights for Six Years.*

	FREIGHTS.					
	1880.	1881.	1882.	1883.	1884.	1885.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Boston & Albany, . . . . .	1.20	1.04	1.07	1.20	1.09	0.94
Boston & Maine, . . . . .	2.33	2.43	2.35	2.24	2.34	2.13
Boston & Providence, . . . . .	2.44	2.77	2.83	2.83	2.82	2.83
Old Colony, . . . . .	2.90	2.99	3.04	3.16	3.00	2.90
Boston & Lowell, . . . . .	2.95	3.13	2.60	2.98	2.33	1.77
Fitchburg, . . . . .	1.37	1.26	1.18	1.19	1.09	1.06
Eastern, . . . . .	1.94	2.06	2.03	1.92	1.81	—
New York & New England, . . . . .	2.86	2.20	1.77	1.38	1.41	1.71
Connecticut River, . . . . .	3.35	2.99	3.07	3.04	3.05	2.96
New York, New Haven & Hartford, . . . . .	2.10	1.79	1.98	1.89	1.96	1.96
Providence & Worcester, . . . . .	2.85	2.80	2.78	2.96	3.09	2.45
Worcester, Nashua & Rochester, . . . . .	2.02	2.22	2.29	2.34	2.33	2.30

*Average Rates of Freight, 1865 and 1885.*

	Rate 1865. Cents.	Rate 1885. Cents.	Per cent. of 1885 to 1865.
Boston & Albany, . . . . .	3.90	0.94	24
Boston & Maine, . . . . .	4.58	2.13	46
Boston & Providence, . . . . .	4.38	2.83	60
Connecticut River, . . . . .	6.20	2.96	48
Fitchburg, . . . . .	4.10	1.06	26
Old Colony, . . . . .	3.20	2.90	91

## STEEL RAILS.

During the year, 214.756 miles of steel rail were laid as against 347.289 laid last year, making the whole amount now laid 3,336.476 miles; being nearly 88 per cent. of the total of main line, including double track and branches. The amount of steel rail laid each year for six years is shown in the following table:—

	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
Steel rail (miles), .	284	154	331	308	347	215

## ROLLING STOCK.

The increase in the number of locomotives during the year has been 25, and of passenger cars, 45; mail and baggage cars have decreased 16; freight and miscellaneous cars have increased 256.

The following table shows the amount of rolling stock returned for the last seven years: —

	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.
Locomotives, .	1,070	1,103	1,161	1,222	1,286	1,391	1,416
Passenger cars, .	1,451	1,512	1,568	1,658	1,790	1,948	1,993
Mail and baggage cars, .	401	403	432	463	482	525	509
Freight cars, .	19,509	21,986	24,502	26,382	28,008	29,701	29,957

## EMPLOYEES.

The average number of persons employed by the railroad corporations was 30,069, being 521 less than in the year before. The following table shows the number employed for each of the past eight years: —

1877-78, . . .	19,043	1881-82, . . .	27,403
1878-79, . . .	19,453	1882-83, . . .	29,844
1879-80, . . .	21,615	1883-84, . . .	30,590
1880-81, . . .	25,490	1884-85, . . .	30,069

The whole number employed by all the corporations making returns to this Board is 34,172.

## STREET RAILWAYS.

Returns were received from 34 street railway companies. During the year one has been incorporated and added to the list — the Natick & Cochituate. The aggregate capital stock is \$8,077,100.00, being an increase of \$344,900.00; their gross debt has also increased \$266,956.60, and now amounts to \$4,945,388.01. The aggregate of stock and gross debt is now \$13,022,488.01.

One corporation made a dividend of 22 per cent., three of 10, five of 8, one of  $7\frac{3}{4}$ , one of 7, one of  $6\frac{1}{2}$ , seven of 6, one of 5, one of 4; while thirteen declared no dividends.

The average rate of dividend on the total amount of capital stock was 6.28 per cent.; and the net earnings (interest deducted) amount to 4.90 per cent. on the aggregate of capital stock and gross debt.

The whole length of track, including branches, sidings, and double track, amounts to 375.908 miles; being an increase of 39.394 miles. The average cost was \$18,582.47 per mile for permanent way, \$9,240.41 for equipment, and \$9,546.37 for land and buildings; making a total cost of \$37,369.25 for each mile of road owned. The number of round trips was 2,698,338, an increase of 281,209 over the previous year; with a mileage of 18,167,619, an increase of 1,934,250. Passengers were carried to the number of 100,746,786, being an increase of 5,852,527 over the number carried during the preceding year. The number of passengers carried on the street railways exceeded the number on the steam roads by 31,143,086.

The gross income was \$5,194,438.00, an increase of \$284,335.12. There was a decrease of net income of \$47,699.29; with an increase of dividends paid amounting to \$62,953.75.

The average amount received for the conveyance of each passenger was 5.15 cents, and the average cost of carrying each person amounted to 4.28; the net profit to the companies being 0.87 cent, against 0.97 cent as compared with last year. The average cost of a round trip was \$1.60, with a profit of 33 cents, being a decrease of 5 cents from last year.

The whole number of horses was 9,785, being an increase of 789; the number of cars was 2,114, showing an increase of 193, and the number of other vehicles was 206. The number of persons employed on street railways was 4,103, being an increase of 257 over last year. The number of accidents reported was 96, of which fifteen were fatal. The number injured the previous year was 76; three of whom were killed.

#### GRADE-CROSSINGS:

The number of crossings of railroads and highways at grade, according to the returns, is 2,118, of which 709 are protected by gates or flagmen.

The largest increase of level crossings has been on the extension of the Woburn Branch of the Boston & Lowell road. These were reluctantly allowed by the Board, in compliance with the unanimous wish of the local authorities and people, chiefly because it was evident that a refusal would have wholly prevented the improvement, which the community ardently desired. It was a case where possible danger was to be weighed against a great convenience, and it seemed to us that the balance was in favor of the convenience.

The statutes of Connecticut recognize a distinction between the comparatively slight convenience afforded by allowing a new highway to cross a railroad at grade and the vital needs of a community that may sometimes be served by allowing a new railroad to cross an existing highway at grade. The first is absolutely forbidden in all cases. The other is allowed, where an exigency is shown. It is an error to suppose that this is a partial exercise of favor toward the railroad companies. The permission is given for the sake of the community that desires the railroad. In building a branch or an extension, a railroad company often acts not for the sake of profit, but to satisfy the demands of the people for increased facilities.

These views are illustrated by the action of the Board in this case. A different decision would have been lamented, not by the managers of the Boston & Lowell, but by the people of Woburn; and it is possible that some directors of the corporation would have received with complacency a refusal which would have excused them from carrying out a costly improvement.

The action of the General Court looking to the reduction of the number of grade crossings in the State is referred to elsewhere.

#### ACCIDENTS.

The total number of casualties to persons reported to the Board at the time of their occurrence, during the year ending September 30, was 517, being 60 more than for the preceding year; of these 74 were to passengers, 236 to employees, 55 at highway grade crossings and at stations, and 152 were to trespassers. Of the whole number 163 were fatal, and 354 were not fatal, and many of them were not serious. The proportion



of fatal accidents is smaller than for any year in the records of the Board.

No passenger was fatally injured by causes beyond his own control, though 12 were reported as less seriously injured; but 14 were killed and 48 were injured by reason of their own misconduct or want of care, nearly all the cases occurring in getting upon or off trains while in motion. The fatalities and serious injuries resulting from such attempts appear to be no warning to others, and the number reported during the year is larger than ever before. Of the employees 194 were train men and 42 were employed in other capacities. Twenty-nine were fatally injured and 207 were less seriously hurt. By far the largest number of accidents, 91, occurred to the men in coupling or uncoupling freight cars. Casualties by falling from trains are next in number, being 42, but these were more frequently fatal. It is more than probable that even this large number of coupling accidents does not comprise nearly all the casualties of that nature, as will appear by an examination of the tabular statement. (Appendix B.)

On the Boston & Albany Railroad the number of employees killed and injured is 55 per cent. of the whole number of casualties, and on the Fitchburg the casualties to employees are 52 per cent. of the whole number. But on the Boston & Providence the number of employees injured is but 30 per cent., and on the Boston & Maine less than 30 per cent. of the whole number of casualties. Again, on the Boston & Albany, of the 86 employees injured 34 were hurt while coupling or uncoupling cars, — almost 40 per cent.; and on the Fitchburg, of the employees injured just 50 per cent. were hurt while coupling cars, while on the Boston & Maine only 22 per cent., and on the Boston & Providence but little more than 16 per cent. of the injuries were received when coupling or uncoupling cars.

Of all the persons reported as injured on the Boston & Albany and the Fitchburg roads, 54 per cent. were employees. The same percentage of the total number of casualties reported on all the roads would raise the number of employees injured from 236 to 279. It is apparent therefore, that the accidents to employees are not reported with equal fullness by all the companies. An examination of the reports of accidents made to the Board during the year, shows that those roads reporting the smallest



percentage of accidents to employees give only the more severe accidents, while others—the Boston & Albany and the Fitchburg especially—report also those which are comparatively slight, but which are no more likely to occur on those roads than on the others. This also appears from the “tabulated statement,” the ratio of fatal accidents to employees on the Boston & Albany being but 8 per cent., and on the Fitchburg but 10 per cent. of the whole number, while on the Boston & Maine and Old Colony the ratio is nearly 19 per cent. of the whole number.

This difference is due to the fact that there is no uniform rule as to the degree of injury which should require a report, and of course the reports do not afford a correct basis for comparison of such accidents on different roads, or on all the roads of this State with those of other States, nor do they give an accurate record of accidents which are not fatal. A reasonable rule, which would operate substantially alike on all roads, would be that any accident which disables a man from continuing his employment should be reported. Such a rule, universally observed, would without doubt greatly enlarge the record of accidents from coupling or uncoupling cars.

The accidents at grade crossings exceed the average for the last ten years, and the number of fatal casualties is larger than in any year since the reports were made to the Board. Several accidents which might properly be placed under the head “At stations” were reported as occurring to “trespassers,” and are included under that head. The number of trespassers injured was less than last year but above the average for ten years.

A comparison of the record of accidents for the last railroad year with that of 1875 reveals some interesting facts and is on the whole favorable to the later date. It is true that the total number of casualties the last year (517) is more than double the number in 1875 (242), and is out of proportion to the increase in length of road, train mileage, passengers carried, number of employees, etc., yet the ratio of fatal accidents to the whole number is much smaller, as will be seen by the following table:—

1875.			1885.		
Total Casualties.	Fatal.	Ratio.	Total Casualties.	Fatal.	Ratio.
		Per cent.			Per cent.
All classes, . 242	132	54	All classes, . 517	163	31
Passengers, . 36	12	33	Passengers, . 74	14	19
Employees, . 84	27	32	Employees, . 236	29	12+
At grade cross-ings, . 19	14	73	At grade cross-ings, . 54	24	44
Trespassers, . 103	68	66	Trespassers, . 152	93	61

The number of accidents to passengers reported in 1885 was double that of 1875, while the increase in the number of passengers carried was but little more than 50 per cent. ; but the number of fatal cases with this large increase of passengers carried was about the same as in 1875, so that the ratio of passengers killed to the whole number carried was in 1875, 1 to 3,511,639 ; in 1885, 1 to 4,971,692.

The larger number of accidents to passengers, not fatal, in 1885 is due in part, probably, to more full reports of injuries not serious and even very slight ; and the smaller proportion of fatal accidents is due in part, perhaps, to improvements in the equipment and operation of the roads, by which passengers are protected, not only from injury for which the corporation would be responsible, but from the effects of their own recklessness.

The number of employees has increased since 1875 about 63 per cent., but the number of accidents reported has increased nearly threefold, which is evidently due to the more full report of minor accidents. For with the increase of more than 60 per cent. in numbers and a like increase in train mileage, there were but two more employees killed in 1885 than in 1875. The fatal accidents in 1885, however, were remarkably few — a smaller number than in any year since 1876, and very much smaller than in either of the last five years. In 1875 the fatal accidents to employees were 20 per cent. of all fatalities, in 1885 not quite 18 per cent., and the average for the ten years preceding the last was 28 per cent.

The number of accidents at highway grade crossings and stations was very much smaller in 1875 than in any year since

that date, and less than half the average number. The proportion of fatalities, however, was very much larger, being 14 killed to 5 injured, while in 1885 it was 24 killed to 30 injured, and for the ten years preceding, the average was 18 to 22. Considering the increased number of grade crossings, the more numerous trains, and the larger population, the increase in the number of this class of accidents since 1876, when there were 41, is not large.

There is less difference in the proportion of fatalities to trespassers than in either of the other classes, the proportion being 66 per cent. in 1875, and 61 per cent. in 1885. The increase of 50 per cent. in the total number of accidents to trespassers is very much less than in the other classes. At the same time the double track, which multiplies the danger to parties walking on the railroad, has increased from 440 miles to 977, and the train mileage has increased more than 59 per cent., while the increase in population of more than 17 per cent. of course furnishes an additional number of persons to risk their lives by walking on the railroad tracks or stealing rides on freight cars.

The amount of damages for personal injuries paid this year by the seven roads of standard gauge terminating in Boston, is \$241,748.29. This includes injuries on all the road operated by these companies, whether in or out of the State.

The following record of accidents to passengers and employees in several other States is interesting in the way of comparison : —

*New York.* (Report for 1884.)

Number of passengers carried, . . . . .	72,125,842
By accidents beyond their own control: killed, 10; injured, 57; or killed, 1 in 7,212,584; injured, 1 in 581,660.	
Number of employees, . . . . .	89,753
Killed, . . . . .	147
Injured, . . . . .	799
Killed, 1 in 610; injured, 1 in 112.	

*Ohio.* (Report for 1883.)

Number of passengers carried, . . . . .	31,378,589
By accidents beyond their own control: killed, 4; injured, 72; killed, 1 in 7,844,647; injured, 1 in 435,813.	
Number of employees, . . . . .	38,123
Killed, 166, or 1 in 229; injured, 677, or 1 in 56.	

*Michigan.* (Report for 1883.)

Number of passengers carried, . . . . .	25,312,275
By causes beyond their own control: killed, 8, or 1 in 3,164,034; injured, 36, or 1 in 703,118.	
Number of employees, . . . . .	19,531
Killed, 62, or 1 in 315; injured, 289, or 1 in 67.	

*Iowa.* (Report of 1884.)

Number of passengers carried, . . . . .	24,634,853
By causes beyond their own control: killed, 6, or 1 in 4,105,809; injured, 47, or 1 in 524,358.	
Number of employees, . . . . .	26,731
Killed, 72, or 1 in 371; injured, 343, or 1 in 78.	

*Massachusetts.* (1885.)

Number of passengers carried, . . . . .	69,603,700
By causes beyond their own control: killed, 0 in 69,603,700; injured, 12, or 1 in 5,800,308.	
Number of employees, . . . . .	30,069
Killed, 29, or 1 in 1,037; injured, not fatally, 207, or 1 in 145.	

Compared with the other States named above, and with Great Britain (given below), the railroads of Massachusetts have been fortunate in their comparative exemption from accidents. It cannot, however, be claimed that our railroads are thus proved to be safer than those situated elsewhere. Another year may show a preponderance against them, by a single train accident; and it is only by taking the record of a number of years that fair comparisons can be made.

Taking ten years 1876-85, the total number of passengers carried was 504,626,162.

The number of passengers killed and injured, by causes beyond their own control, was 274. The number killed was 45,\* or 1 in 11,213,914; injured, 229, or 1 in 2,203,607.

*Accidents to Persons in Great Britain.*

During the year 1884, as appears by the report of the Board of Trade, the casualties on the railroads of Great Britain were —

	Killed.	Injured.
Passengers, . . . . .	135	1,491
Employees, . . . . .	546	2,319
Trespassers, . . . . .	453	290
Total, . . . . .	1,134	4,100

\* This number is not absolutely correct, as all the tables do not distinguish the fatalities to passengers from causes beyond their own control.

The total number of passenger journeys (passengers carried), exclusive of season-ticket passengers, was 694,991,860.

Of passengers, by causes beyond their own control, there were killed 31, or 1 in 22,419,092; injured, 864, or 1 in 804,388.

If the estimated journeys of season-ticket passengers are added, the proportion would be nearly 1 in 28,000,000 killed, and 1 in 1,000,000 injured.

The total number of employees was 346,426; killed, 546, or 1 in 634; injured, 2,319, or 1 in 149.

### *Train Accidents in the United States.*

Tables of train accidents, as reported in the "Railroad Gazette," will be found in the Appendix.

The total number during the year ending Sept. 30, 1885, was 1,230, classified as follows:—

Collisions, . . . . .	469
Derailments, . . . . .	695
Other accidents, . . . . .	66
	<hr/>
	1,230

This shows a decrease of 63 from the number in the preceding year, when there was a still larger decrease from the number in the previous report.

The total number of persons killed was . . . . .	331
of persons injured, . . . . .	1,534

—a decrease of 57 in the number of fatal accidents, and 379 in the number of injuries not fatal.

Number of accidents causing death to persons, . . . . .	211
" " causing injury but not death, . . . . .	282
" " causing no injury, . . . . .	735

One of the train derailments reported in the "Gazette" was caused by the presence of a cow upon the track of the Erie & Wyoming Railroad. By this accident six persons were killed at once, five were fatally hurt, and thirteen were injured, but not fatally. This disaster proved that the cow is not



always the only sufferer in such cases, and vindicates the wisdom of the Massachusetts legislature in trying to prevent such casualties by its law requiring railroads to be fenced.

#### TRAIN ACCIDENTS IN GREAT BRITAIN.

There were 105 train accidents in Great Britain and Ireland during the year 1884, viz. : —

Collisions at junctions, . . . . .	10
Collisions at stations or sidings, . . . . .	40
Collisions of trains following one another, not at stations or sidings, . . . . .	3
Deraillments from obstructions or defects of way, . . . . .	21
Boiler explosions, failure of axles, wheels, etc., . . . . .	9
Trains entering stations at too great speed, . . . . .	11
Trains wrongly turned into sidings, etc., . . . . .	11
	<hr/> 105

Of these, 23 were due to defective construction or maintenance of road or works; 6 were due to defective construction or maintenance of rolling stock; 70 to negligence, etc., of officers and servants.

By these accidents, 31 passengers and 546 officers or servants of the railway companies were killed, and 864 passengers and 2,319 officers and servants of the companies were injured. These casualties greatly exceed the number of killed and injured in the United States, as reported in the "Gazette," which is probably not far out of the way. It might appear, in view of the immense excess of railroad mileage in the United States, that this is a very favorable showing, the miles operated being —

In Great Britain, . . . . .	18,864
In United States, . . . . .	115,672

But when we consider that the number of passenger journeys, or passengers carried, in Great Britain in 1884 was about 695,000,000, and in the United States the number was not half as large, being 334,570,766, the comparison does not appear so favorable to the latter. On the other hand, the passenger mileage in the United States \* probably equals, if it does not

\* Passenger mileage in United States, 8,778,581,061; that of Great Britain is unknown.



exceed, that of Great Britain, the average journey being much longer, so that the comparison again seems favorable to the United States. The statistics we have, however, do not afford a fair basis of comparison, for besides being compiled on different plans, those of Great Britain are official and those of the United States are not entirely so.

#### RECENT LEGISLATION.

##### *Interlocking Signals.*

Chapter 85 of the Acts of 1885 extends the power of authorizing interlocking or automatic signals and switches at railroad crossings to cases where only one road desires to use them and is willing to pay for them. Under this act, such systems have been approved by the Board at the intersection of the Boston & Albany with the New London Northern at Palmer, at the intersection of the Boston & Albany with the New Haven & Northampton at Westfield, and at the intersection of the Boston & Maine with the Boston & Lowell at Wilmington Junction. Other applications will, as we learn, soon be made by various corporations. The system at Medfield Junction, at the crossing of the Old Colony Railroad and the New York & New England Railroad, was established by joint action and operated under the old law.

Chapter 110 gives the Board, upon petition of the proper municipal authorities, power to regulate or forbid the use of level crossings for the purpose of making up or disconnecting freight trains. Action on this matter was warmly urged by individuals and communities that had been exposed to inconvenience and danger by the excessive use of grade crossings for making up freight trains and distributing freight cars. Defects in our statutes and difficulties in obtaining proof as to violations of law made some legislation necessary. The Board, who were consulted by the Railroad Committee, favored some action, and confidently believed that if any competent tribunal were clothed with power to protect the rights of travellers, it would rarely, if ever, be called upon to act, because the existence of such authority would force the railroad companies to redress the wrongs of the public of their own motion. And ample means of so doing had been given to railroad managers

by recent laws. One reason for this confidence was the belief that the existing obstructions to travel were not the result of deliberate and studied intent to encroach on the rights of the public, but that they were abuses into which railroad operators were gradually drawn, tempted by the necessities of their growing traffic. And it was thought that when their attention was called to the subject they would find some way to obviate the evils of which the public complained.

The result has justified this belief. Not one case has been brought before the Board. In some places, the obstructions to travel have wholly ceased. In others, railroad managers have begun improvements which will relieve existing difficulties; and they have done this with such good faith and earnest purpose, that the public have been contented to await the completion of their plans.

If there is at this time one place in the State where a highway crossing is unreasonably used by freight trains to public annoyance, it is either because there is not public spirit enough to complain, or because the people believe that their inconvenience is overbalanced by the convenience of traffic, so that on the whole the people are gainers by the practice.

The legislature of 1885 may well be congratulated on this act; for the perfection of legislation is reached when a law executes itself, and when no tribunal is called upon to administer it because no wrong remains unredressed.

Chapter 194 contains several provisions relating to grade crossings and designed to promote their abolition. The first section provides that twenty voters may petition for separation of grades, instead of confining the right of petition to the corporations interested. This provision has been used in several cases, and is likely to accomplish much good. The managers of the Old Colony Railroad especially deserve credit for their efforts to do away with grade crossings under this act. Some of the other provisions of this statute have been already found practically very useful in expediting proceedings for separation of grades.

#### WHISTLING OF LOCOMOTIVES.

Chapter 334 empowers the Commission, after notice and hearing, to forbid or regulate the use of the locomotive whistle

at any specified highway crossing. It was enacted on the petition of parties who urged that the injuries and loss of life resulting from the use of the whistle exceeded the benefit of such use. They spoke of accidents arising from the frightening of horses, and still more of the disturbance and loss of sleep which were caused by it, and which in case of illness were often attended with fatal results. The Railroad Companies did not oppose the passage of the bill, only asking that it should be so drawn as to protect them in their obedience to its provisions. Heretofore they have been peculiarly situated in regard to this matter. The law required the ringing of a bell or the sounding of a whistle. And in most cases the bell would be the appropriate warning. But if a crossing accident occurred, the question was always left to the jury, whether at this particular crossing, and in this special case, the whistle ought not to have been sounded; and juries were sure to find that it ought to have been used, and to return a verdict for the plaintiff. The Companies, therefore, could not consult the comfort and health of the community without exposing themselves to heavy penalties. Under the new law, an order of this Board will shield the Company acting in obedience to it.

Four petitions have been acted on, and whistling has been forbidden at the several crossings covered by these petitions.

The Board believes that this legislation is wise. They agree with their predecessors in holding that the value of the whistle as a danger-signal is impaired by its constant use as a mere crossing-signal; that such use inflicts a heavy penalty upon the innocent to protect the reckless and undeserving, and that at many crossings the whistle is simply a useless annoyance.

It is not improbable that fatal accidents will occur at some of the crossings where whistling is now dispensed with. Indeed, it is certain that at some time they will occur, for such fatalities have happened, from time to time, when whistling was permitted; and its cessation will not relieve careless people from danger. But such accidents will not disprove the wisdom of the law. If the natural horror arising from the occurrence of a fatal casualty should ever lead to a condemnation of the statute and to a demand for its repeal, it should be remembered that the benefits of the law are constant, although

they are not visible; that no law can always shield men from the results of their own recklessness, and that a highway crossing accident is almost impossible under any state of law, if travellers will use ordinary care.

#### FOOT GUARDS.

During the railroad year no death was caused by the catching of any brakeman's feet in a frog or other angle, but since October 1st, one such fatal accident has occurred. The three roads that have blocked their frogs and other angles report that no derailment or other trouble has resulted from the use of foot guards. Nor does any serious objection to the application of this device appear, except the cost. The Michigan Commissioner reports favorably on the working of the law, which makes blocking compulsory in that State.

#### SAFETY FREIGHT COUPLERS.

Our last report contains a full account of the action of the Board under chap. 134 of the Acts of 1884. The act, as it will be remembered, did not go into full effect until March 1, 1885. After that date new cars and old draw-bars needing repairs were to be supplied with a coupler approved by the Board. The number of each of the five approved devices adopted by the various railroad companies of the State is as follows: Janney, 4; Hilliard, 24; Cowell, 78; Ames, 294; United States, 840.

The Board has been importuned to approve several devices during the past year, in addition to those already prescribed for use. But we have borne in mind the rules already laid down for our guidance, and we have also considered that, in the opinion of the General Court, it was time for the selection of a limited number of couplers, which should not be increased without cogent reasons. Safety is to be found not only by selecting good devices, but by limiting their number. The ideal of safety will only be reached, if ever, when one universal coupler is adopted. If it were shown that a sixth newly invented coupler were just as good as any one of those already selected, it would not follow as of course that it ought to be approved. To reduce rather than increase the number of couplers in use is the way to gain safety.



The Board did not entertain the feeling of annoyance ascribed to them by a prominent railroad journal, when a leading railroad organization confined its approval to three of the couplers recommended by them. To select three out of five devices offered for choice is a movement toward safety. If that organization had had power to enforce its choice everywhere, and if it had selected only one of the approved couplers, that would have been a complete triumph of the law and of the policy that seeks to diminish the loss of life and limb by legislation.

The Board, however, has not, under the language of the law, felt at liberty to refuse all applications for approval of couplers. But it has required that they should have borne the test of actual traffic, and that their approval should be requested by the Directors of some company operating a road in this State and desiring to use them. Only two such applications have been made during the year. They now await hearing and decision.

The action of the Commonwealth in prescribing the use of safety couplers by law has been subjected to severe criticism. At the meeting of the Master Car Builders' Association in June, a member of the convention (not a Master Car Builder) stated as a fact that "the action of the Massachusetts legislature had cost more lives than the old system, as there was no uniformity in the couplers put on." He was, indeed, answered on the spot by one of the most intelligent Master Car Builders in the country, who, coming from this State, declared that he had not only heard of no loss of life from this cause, but that he had heard of no serious inconvenience. But a charge so serious as that of the delegate referred to, made not as a theory or as an opinion as to what might happen, but stated as a fact, seemed to call for thorough investigation. The Board therefore issued the following circular addressed to every railroad company in the State : —

[CIRCULAR.]

Boston, June 23, 1885.

*To the Superintendents of the several Railroads :*

In all future reports of accidents, fatal or otherwise, arising from the coupling or uncoupling of freight cars, it is desired that the nature of the couplers used should be stated.

You are also requested to state to the Board, as soon as may be, the number and nature of such accidents that have occurred since March 1, 1885, where either of the couplers was one of those prescribed under the law by this Board by its order of Dec. 5, 1884.

Per order,

WM. A. CRAFTS, *Clerk*.

The replies to this inquiry show that not one accident, fatal or otherwise, has been here reported arising from the use of the automatic safety couplers approved under the law up to the date of the circular; and since that time, up to the date of this report, not one accident of any kind has been reported arising from the use of such couplers. Such fatalities may occur. The presence of a safety coupler is not absolute insurance against them. But up to this time not one accident has occurred within this State. And thus the declaration that the legislation of the Commonwealth had actually caused the loss of life is shown to be not only untrue but utterly without foundation or pretence.

The Board still believes that good has resulted and that further good will result from the action of this State and of other States in requiring that brakemen should be protected by the compulsory use of safety couplers. That the accomplishment of the desired reform will necessarily be a work of time we have always known. If any one thinks that it is hastening too fast, it is well to recollect that in 1874 the Master Car Builders voted that the adoption of automatic car couplers was a necessity, and that the subject has been frequently discussed by them without a definite result. The last convention referred the subject to a committee of experts, who have selected twelve couplers for experiment; and these, after the test of actual traffic, are to be discussed at the next annual meeting in June, 1886. In the meantime compulsory laws will go into effect in New York and Michigan; and this will tend to hasten the day when safety car couplers will be universally adopted, and when one or a small number will take the place of the many patented devices that are now in partial use, and will be found on the million of cars that are now supplied with the link and pin.

But it may be that in this matter congressional action will be found expedient. Congress can compel the use of safety couplers for the interstate commerce which constitutes the bulk of freight traffic. And when that is done, local traffic will con-



form by law, or without the need of law, to the rules laid down for through business.

### HOUSATONIC R.R. CO. AND CHAPTER 338 OF 1885.

The action of the Housatonic Railroad Company has been the subject of much investigation by the Board during the past year, and also of legislative action. And a full account of this is given in the body of our report, because of the importance of the questions involved. It is better, in the opinion of the Board, to consider principles as applied to actual cases, than to engage in abstract discussions.

#### *Decision of the Board, March 12, 1885.*

The Hurlbut Paper Company, and other manufacturers, complain of excessive freight charges by the Housatonic Railroad Company, and ask the Board for relief. At the hearing in Lee, some of the traders of the town joined in making like complaints. The Housatonic is a Connecticut corporation, which leases and operates the Berkshire Railroad, and the Stockbridge & Pittsfield Railroad in this State. Of course, no one denies that it is subject to Massachusetts laws in its operation of two railroads in Massachusetts. Five matters were discussed at the hearing: 1. The charges for freight, especially of manufacturers' materials, coming from New York via Bridgeport, the southern terminus of the road. 2. Charges for coal coming via Rondout to Lee and other points on the road. 3. Charges between Pittsfield and Lee and other local points. 4. Illegal discrimination between different traders in Lee. 5. Illegal discrimination in favor of Pittsfield traders over those in Lee. Upon the third, fourth and fifth points, the evidence offered at the hearing was full and conclusive. Upon the first and second, the testimony was somewhat meagre, and further investigation was made necessary, which has delayed the report upon this case. We speak of Lee as a central point in considering the question, and what is said of Lee applies, with slight modification, to Great Barrington and other places in the valley.

(1) The rate for manufacturers' materials from New York to Lee, and to intermediate points between Lee and Pittsfield, is \$3.60. The grades are light, as the road follows the Hou-

satonic River. The industry of the valley is largely of one kind, the manufacture of paper, giving heavy freights each way — for the material and for the product. One company pays the railroad corporation \$18,000 a year; another received 19,000 tons of stock in one year; and several others had freight transactions amounting to thousands of tons, exclusive of coal. The road is prosperous, making good dividends, and standing high in the market. The rate has long been a subject of complaint, and promises have often been made to reduce it. It was clearly proved, by many witnesses of high standing, that President Barnum had admitted that it was “exorbitant,” and agreed to reduce it to \$3. But he said that this was impossible until the expiration of a contract for steamer transportation from New York, which would expire July 1, 1884. When that time came it was said that a mistake had been made, and that the termination of the contract was to be July 1, 1885, and so the president of the company stated at the hearing. In fact, it appears upon inspection that the contract expires Jan. 1, 1886. But it also appears, that the contract is no cause for keeping up the rates, for it only provides that the sums charged for transportation by boat shall not exceed the average rates charged to the Naugatuck Railroad. Certainly a limit fixed as a maximum is no reason for upholding a rate which has been admitted to be too high in itself. And now that the president has refreshed his recollection as to the contents of this contract, it is presumed that he will at once reduce the rates. A promise to reduce when the contract ceases to exist is binding in spirit, when it is discovered that the contract does not affect the rates. The statements of the president on this point are conclusive admissions that the freight charge is unreasonable. The rate from New York to Bridgeport is, on the best testimony attainable, less than \$1 on the articles in question. Thus the charge from Bridgeport to Lee, 99 miles, is not much less than \$3, and at the lowest is \$2.60. And this, for manufacturers’ materials and for their products, is excessive, when it is considered that the whole business of the community, including the whole traffic of the road, depends upon manufacturing industry. Testimony was introduced showing that Philadelphia dealers in paper materials could not reach the Housatonic Valley with their merchandise, and tending to

show that rival manufacturers at Holyoke had a lower rate, which, though slight as to each ton of freight, gave a decided advantage in business. This branch of the case, however, may well rest upon the admissions and promises made by the president of the railroad company.

(2) The rate for coal from Rhinecliff and Newburg over the Housatonic and connecting roads was \$2, with a rebate of 5 cents to Lee and Lenox Furnace, but on September 15 it was advanced 20 cents. The old rate, \$1.95, was admitted by the president of the company to be too high, and he has said that he would try and reduce it. The increase was due to a demand of the Boston & Albany Company, who by arrangement charged \$1.67 for coal to Lee via Pittsfield, \$1.72 to Stockbridge via State Line, and like rates to other points. Discovering that the Hartford & Connecticut Western was "cutting rates," the agent of the Boston & Albany demanded that, as a measure of protection to its interests, the Housatonic should advance 20 cents on its division with the Hartford & Connecticut Western, or reduce 20 cents of its charge from Pittsfield to Lee. Naturally the Housatonic preferred to make the advance and notified the Hartford & Connecticut Western that its proportion would be \$1.30 to Lee, 26 miles, and the same for South Lee, 22 miles, with similar rates to other points. To each coal dealer the result was an increase of 20 cents per ton in his charges. But the Hartford & Connecticut Western rebated 25 cents instead of 5 cents to each customer except John B. Hull. He only received 5 cents as heretofore, and was obliged to refund 20 cents to each customer — an amount exceeding his commission. The president of the Housatonic Company repaid this amount up to December, but \$325 accruing since that time remained unpaid. This Mr. Barnum, at the hearing, very properly promised to repay. Nothing more need be said as to this increase, except that in future a difference as to rates between rival roads ought never to result in an increase of freight bills over established charges. But the old charge seems to have been unreasonable, especially when coal is considered as the source of power and the life of manufacturing industry. The following table shows by comparison the unreasonable nature of the charge as it now exists : —

RAILROADS.	From	To	Miles.	Rate.
New Haven & Northampton, . . . . .	New Haven,	Holyoke, .	70½	\$1 35
New London Northern, . . . . .	New London,	Palmer, .	65	1 75
New York & New England (Norwich Division), . . . . .	New London,	Worcester,	73	1 00
Boston & Albany, . . . . .	Hudson, .	Warren, .	121	1 77
Boston & Albany and Conn. River,	Hudson, .	Holyoke, .	103	1 81
Old Colony, . . . . .	New Bedford,	Clinton, .	76	1 50
Old Colony, . . . . .	New Bedford,	Fitchburg,	90	1 60
Old Colony, . . . . .	New Bedford,	Plymouth,	53	1 00
Conn. Western & Housatonic, .	Rhinebeck, .	Lee, .	81	2 20
N., D. & C, C. W. and Housatonic,	Newburg, .	Lee . . .	106	2 20
		(Taking the Housatonic Division.)		
Housatonic, . . . . .	Canaan, .	Lee, .	26	1 30
Housatonic, . . . . .	Canaan, .	South Lee,	22	1 30

Nothing was offered to meet this complaint, except the statement that there was on the part of some manufacturers great and injurious delay in unloading the cars. But the true way to deal with this evil is to enforce a charge for demurrage against parties so offending, and not to demand an unreasonable amount alike from the innocent and the guilty. If it is said that such a practice will lead to complaint, the answer is that it will be an unjust complaint, while at present it is well founded, and that the cost of unreasonable delay should be defrayed by those who cause it, instead of being shared by those who do not.

(3) The rate on merchandise, especially on the product of the mills when transported to Pittsfield, is excessive, being 6 cents on a hundred pounds, or \$1.20 per ton, for a haul of 11 miles. And the same excessive rate is imposed on the materials of manufacture conveyed from Pittsfield to Lee and other local points. These rates are so high that they do not need comparison to show them to be excessive.

(4) It was admitted that general merchandise is carried from New York to Pittsfield by boat and rail for \$4, while the rate to Lee, 11 miles less from the same terminus, is \$5, the boat and railroad running in concert; and it was also admitted that, under the line contract, the Housatonic Railroad received \$1 more for the shorter distance than for the longer, viz., \$3 to Lee and \$2 to Pittsfield. No reason whatever was suggested



for this apparently gross injustice. The fact which probably governs the action of the Housatonic road is that there is keen competition at Pittsfield. But this is not a sufficient reason for exacting a rate greatly exorbitant in itself. The receipt of \$3 for a distance of 99 miles, while \$2 is charged for 110 miles, can only be defended upon the audacious plea that railroad companies may charge "all that the traffic will bear," and upon the supposition that the people of southern Berkshire cannot help themselves. But the statutes of Massachusetts reenacting the common law, require reasonable rates, and place a penalty upon the exaction of unreasonable rates. And it is the duty of this Board to point out any violation of these statutes or of their spirit. The evils of an unjust discrimination are manifest in this case. It was found that the traders of Pittsfield, taking advantage of this gross preference, are enabled to underbid those of Lee, sending their wares in wagons and underselling the Lee merchants on their own ground. The exaction complained of clearly violates the spirit of section 190, chapter 112, Public Statutes, commonly known as the "Short-haul law." The parties would perhaps set up as a legal defence against an indictment the fact that the rate was a joint one made by the combined line of steamboat and railroad from New York. But so far as this hearing is concerned, it is not necessary to consider this point or any nice question of law. For it was admitted that for freight originating in Bridgeport and transported over the Housatonic Railroad alone, the same preference was given to the more distant point.

It was also shown that to one Pittsfield dealer rebates were made on one class of goods by the Housatonic Railroad, thereby reducing still further the rate to the more distant point. With this rebate it was not pretended that the steamboat or the "line" had any connection. Indeed it was stoutly denied by the freight agent that any rebate had been made for five years to any Pittsfield trader. Only when the name was introduced in cross-examination was he obliged to admit that Mr. Mills had a rebate of 2 cents on each 100 pounds of kerosene, reducing his freight to 18 cents, while customers at Lee, the nearer point, receiving the same article in like quantities were obliged to pay 25 cents per hundred. The pretence for this was that he sold to manufacturers. But that this was a

mere pretence appeared clearly. (1) He was allowed this rebate on all he sold to other persons as well as to manufacturers, he being engaged in general trade. (2) The Lee parties sold to manufacturers on the same scale of business, but received no rebate. (3) No usage is known by which parties selling to manufacturers are entitled to any allowance by way of rebate or other discrimination. We may add that we are not aware of any law that would justify such usage, if it were proved to exist, in violation of the laws forbidding preferences and lower rates for the longer distances. This secret preference, so secret that it was denied until forced from the witness in cross-examination, is a clear violation of chapter 225 of the Acts of 1882, and of section 188 of chapter 112, Public Statutes, as well as of section 190 of that chapter.

(5) The testimony as to discrimination against one trader in Lee and in favor of another was remarkable. Both gentlemen testified to facts which were not denied by the freight agent of the railroad company. Both were traders in the central village of Lee. Mr. Casey paid 25 cents freight for each 100 pounds of merchandise coming over the Housatonic road. Mr. Williams received the same goods, in like quantities and under precisely the same circumstances, for 20 cents per hundred pounds. Mr. Casey's transactions were extensive, amounting to 34 car-loads in a year, and they were, both in the aggregate and in detail, quite as large as those of his rival, Mr. Williams. He had pressed for lower rates in vain, appealing to the freight agent who gave the rate to Mr. Williams. No excuse, or pretence of any, was suggested for this unlawful preference. It was a gross and wanton violation of law. And we are glad to believe that the president of the company was as much surprised to learn it as were the members of the Board.

Finally, the Board informs the president and directors of the Housatonic Railroad Company that it considers that it is reasonable and expedient, in order to promote the accommodation of the public, that freight rates for manufacturers' materials and products, to and from Lee and other stations in southern Berkshire, coming from and going to the South, be reduced by at least 12 per cent.; that coal rates be so reduced that through



rates from Rhinebeck shall be at least 20 per cent. less than they now are; that local rates between Pittsfield and the towns south of it be reduced for manufacturers' materials and products at least 25 per cent.; and that no higher rates be charged for transportation from Bridgeport to Lee and other points south of Pittsfield, than are charged from Bridgeport to Pittsfield. We also advise that this rule of equal rates from Bridgeport to Pittsfield and Lee and other points south of Pittsfield be applied to the joint rates for transportation by land and water to those points from New York. And this last recommendation is made without regard to the legal question as to whether the rates condemned are violations of section 190 or not, but upon the ground that they are unreasonable and exorbitant. And the Board further gives notice to the president and directors of said corporation that, in its opinion, the corporation has violated the provisions of sections 188 and 190 of chapter 112 of the Public Statutes, and of chapter 225 of the Acts of 1882, as more fully set forth above.

This report was made known to the company on March 12.

The petitioners had reason to expect a compliance with the recommendations of this report. Indeed, at one time President Barnum informed the Board that a satisfactory reduction had been made. But failing to obtain redress, the aggrieved parties applied to the General Court for relief; and it responded by the passage of chapter 338, giving this Board power, after notice and hearing, to fix rates for transportation of freight on this road, between points within the State, and to fix a maximum for rates between points on the road in and out of the State. This bill was, at the request of the Railroad Committee, drawn by the Chairman of this Board.

The Commissioners were requested under the provisions of this Act to revise the rates, and a hearing was commenced at Lee, on July 9. Before this hearing, coal rates from Bridgeport were properly revised by the company, but the revision did not extend to other points and routes. A partial revision was made of rates and classification of general merchandise, but the most important matter of rates for manufacturers' materials and products was not touched. The report of the Board upon this second petition was as follows: —

*Decision of the Board July 27, 1885.*

This was a petition asking relief under chapter 338 of the Acts of 1885, giving this Board power to fix rates for freight received or transported on the Housatonic road at or to points in this Commonwealth. A full statement of facts is reserved for our report to the General Court. But it seems proper that our orders under the law should be accompanied by a brief explanation and by a reply to criticisms made at the hearing upon the action of the legislature. On the 10th of February, a hearing was held at Lee, where sundry violations of law by the railroad company were proved; and it also appeared, by testimony and by admissions, that unreasonable rates were charged. The Board recommended a redress of these wrongs. The violations of the "short-haul law" and of the law against preference were discontinued. Promises were made as to the unreasonable rates. But after long delays, the petitioners, alleging the violation of these promises, procured the passage of this Act. It is now said, on behalf of the company, that the statute is arbitrary, communistic and unjust, discouraging to investors and menacing to capital; that it might as well be applied to the products of a paper mill as to the rates of a railroad company, because both stand on the same footing; that it is an unjust interference with private property, and that it tends to destroy the rights of property. It is also alleged that, as to freights between points in and out of the State, it is unconstitutional.

These objections appear to be founded on an entire misapprehension of the well-settled law applying to railroad corporations, and on a forgetfulness of familiar principles which need to be repeated whenever they are publicly denied. The right of the State to fix rates for railroad corporations, either directly or by delegated authority, has often been affirmed by the courts. It has been traced to the grant of power to take land by right of eminent domain, and to the obligations assumed by every common carrier. The principle is as old as the first ferry that ever was established in England or America. And if any railroad manager still doubts its existence, he might learn it from the hackmen at his stations. For they are not allowed to "extort what they will," or "to charge wha

the traffic will bear," or to take advantage of the absence of competition, but they have, for generations, been held to prices fixed by authority delegated by the legislature:—

“ Railroad corporations hold their property and exercise their functions for the public benefit, and are, therefore, subject to legislative control. The legislature which has created them may regulate the mode in which they may transact their business, and the prices which they shall charge for the transportation of freight and passengers. All this is within the domain of legislative power, although the power to alter and amend the charters of such corporations has not been reserved.”— [*Kimball v. Boston & Albany Railroad Company*, 70 N. Y. Reports, 569.

“ In respect to charters for railroads, both the legislature and the corporation act as trustees of the public interest to some extent; for the corporation is intrusted with the right of eminent domain, which is in its nature a public right, and is not to be sacrificed to uses that are exclusively private. The private interests of stockholders are likely to have a controlling influence with the officers of the company, and it is important that the legislature should possess the power to prevent abuses to which this influence may lead. To some extent they would possess such a power without any clause in the charter or general law reserving it. But, to define their rights more clearly, the clause has been introduced reserving to them the power to alter, amend and repeal.”— [*Commonwealth v. Eastern R. R. Co.*, 103 Mass., 254, 257.

These principles have been fully adopted by the supreme court of the United States in what are generally known as the Granger cases:—

“ Railroad companies are engaged in a public employment affecting the public interest, and are subject to legislative control as to rates of freight, unless protected by their charters.”— [*C. B. & Q. R. R. Co.*, v. *Iowa*, 4 Otto, 155, 161.

In *Munn* against Illinois, 4 Otto, 113, the doctrine was applied to elevators and warehouses, and the broad principle was declared, “ When private property is devoted to a public use, it is subject to public regulation.” And the right to fix rates for elevating and storing grain was declared to be the same right always exercised in regulating tolls at ferries and in fixing the fare of hacks. In *Cincinnati, Milwaukee & St.*

Paul Railroad Company against Ackley, 4 Otto, 169, the court went further, and held that the legislature may decide what is a reasonable price; and the railroad company cannot escape the law by proving that the price fixed by it was reasonable.

Every railroad company has to some extent a monopoly. It might become a dangerous and destructive monopoly but for the existence of this supervising and restraining power. No such danger exists in regard to the paper mill to which the railroad company has been likened, nor has any such public trust been assumed by its owners. It was said at the hearing, that the paper mill and the railroad company are public corporations. Technically both are private corporations, but practically the railroad company is a public corporation, holding a public trust and subject to public control:—

“It is true that the real and personal property necessary to the establishment and management of the railroad is vested in the corporation, but *it is in trust for the public*. The company have not the general power of disposal incident to the absolute right of property; they are obliged to use it in a particular manner and for the accomplishment of a well-defined public object.”—[*Worcester v. Western R. R. Co.*, 4 Met. 564, 566.

These are not the words of a communist or of a granger. This is the language of Chief Justice Shaw, one of the wisest and most conservative of jurists. If the words seem to go too far, it is not necessary to go nearly as far in order to uphold this law. In this State the common law has been re-enacted and reinforced by legislation. For fifty-four years every railroad charter has been subject to amendment, alteration or repeal at the pleasure of the General Court. And for fifteen years all rates have been “subject to revision and alteration by the General Court or such officers or persons as it may appoint for the purpose, anything in the charter of such railroad corporation to the contrary notwithstanding.” These just provisions enacted by the legislature and laid down by the courts have not deterred capitalists from investing in Massachusetts railroads, nor have they injured their stability or diminished the value of our railroad securities. On the contrary, these securities have been protected by the conservative influence of justice. The same law has secured the interest of the people and the rights



of associated capital. When the charge of communism is made against these statutes and decisions, we answer that the most dangerous promoter of communism is the advocate of unrestrained monopoly, who says of his franchises and his customers alike, "May I not do what I will with my own?"

It will hardly be denied that our State law applies to a foreign corporation operating railroads in Massachusetts. For a company accepting a franchise here accepts all its accompanying liabilities, and is not privileged above domestic corporations by being freed from their duties to the public.

It is said that railroad commissioners should confine themselves to recommendations, and not undertake to fix rates. Certainly this Board has never coveted the power of establishing rates. But a recommendation that is never to lead to anything more is no protection for the public. A solemn hearing under such conditions, would be only a solemn farce. In this very case the president of the company admitted in so many words, that certain charges were "excessive" and "exorbitant." At this last hearing he stated that \$2 per ton was "a just rate," "a paying rate," and a "reasonable rate" for transporting merchandise between Lee and Bridgeport, but he persists in extorting \$3 for that service. In his view, the Board might properly recommend that he should reduce his rates; but when he will not, we are to follow the charge of Dogberry, and "take no note of him, but let him go," and the State is to acquiesce, while a corporation acting under its authority takes from its people and admits that it takes 50 per cent. more than it has a right to take. This would be a humiliating position, not only for the Commissioners, but for the General Court and the people, whose servants the Commissioners are. A better precedent was set when this same company refused to regard the recommendation that a proper station should be furnished at Stockbridge. Then the General Court promptly ordered it to be done. It is not claimed that the Board should generally direct the construction of stations. Such laws should only follow the rejection of reasonable recommendations.

The act is said to be unconstitutional, so far as it relates to interstate commerce; and plausible arguments can be made in defence of this view. Such arguments have been made before, especially by Messrs. Evarts, Lawrence and Stoughton in the

great case of *Peik v. Chicago & Northwestern Railway*, 94 U. S., 164. But the law of the land is to be found not in the briefs of counsel on the losing side of a case, nor in the dissenting opinion of a minority, but in the decision as pronounced by the court. And this decision, given by Chief Justice Waite, sustains the constitutionality of a State law fixing a maximum of freight and passenger charges, including those brought into and those carried out of the State, but excepting freight merely in transit through the State. In this case the chief justice said : —

“ These suits present the single question of the power of the legislature of Wisconsin to provide a law for a maximum of charge to be made by the Chicago & Northwestern Railway Company for fare and freight upon the transportation of persons and property carried within the State, or taken up outside the State and brought within it, or taken up inside and carried without.” — [p. 175. “ As to the effect of the statute as a regulation of interstate commerce : The law is confined to State commerce, and such interstate commerce as directly affects the people of Wisconsin. Until Congress acts in reference to the relations of this company to interstate commerce, it is certainly within the power of Wisconsin to regulate its fares, etc., so far as they are acts of domestic concern. *With the people of Wisconsin* this company has domestic relations. Incidentally they may reach beyond the State. But certainly until Congress undertakes to legislate for those who are without the State, Wisconsin may provide for those within, even though it may indirectly affect those without.” — [pp. 177, 178.

While this decision is unreversed by the supreme tribunal by which it was made, it gives law to us, whatever may be said of it by any member of the bar or railroad manager, or by any State or United States circuit judge. It is the direct decision of the highest court upon a question of constitutional law.

The rates subject to revision are as follows : —

(1) Since the passage of the law and since the petition for revision, coal rates from Bridgeport to Lee and other points in the valley have been fixed at a satisfactory amount, viz., \$1.50. No action is called for in regard to this rate. But it is desirable that the consumers of fuel in the Housatonic valley should have a choice of places and dealers, and also the widest choice as to varieties of coal. The moderate rate from Bridgeport is of itself proof that other existing rates are too high. Of course the Board cannot direct a joint rate with any other



carrier, but must confine itself to fixing local rates on the Housatonic Railroad. Nor would it be fair to attempt to make a reasonable through rate on this road by putting upon it the whole burden of reduction. It is only bound to do its share and to give reasonable rates over its tracks, although excessive charges on a connecting road may make the joint rate too high.

(2) Upon manufacturers' materials and products we have taken the repeatedly expressed judgment of the president of the company, that 15 cents per 100 pounds was a fair rate between New York and Lee; and that two-thirds of this is fairly earned by the road between Lee and Bridgeport. The Board has not seen any cause to interfere with the convenient practice which now exists, and which is not objected to by any one, of classing all the manufacturing places together, so that the freight to each shall be the same. The more northern places gain an advantage by this on goods coming north and lose on goods coming south. And this is reversed as to the southern towns. It is reason enough for not disturbing this arrangement that no one asks it. And no law in this State requires that freight charges should always be in strict proportion to distance. Our revision is imperfect, because the testimony is imperfect and fragmentary. It is subject to further revision upon the application of the railroad company or of any party in interest.

(3) The complaint of the general dealers is that while a reduction was made upon certain classes of goods, its benefits were neutralized by a change of classification, so that on the whole the traders gained nothing. Thus, class 1, paying the highest rate, was reduced, but articles in class 2 were promoted to class 1, while classes 3 and 4 were reckoned as class 2. Reductions were also made upon articles never transported on this road to or from Lee and its vicinity (such as malt), while articles in which there is an extensive traffic were transferred to a higher class.

It was stated for the manager of the road that much of this injustice was due to inadvertence, and that it would be corrected in a new revision of the freight tariff. We desire to believe this, and to give an opportunity to correct the injustice and inequality which result from the incomplete revision of rates made by the Housatonic Company. The Commissioners are reluctant to fix the details of rates — a work which belongs to the man-

agers of the railroad company, which they are best fitted to perform, and which should not be attempted by any one else except in a case of clear necessity. Further action is therefore postponed until August 22, in the hope that proper rates will before that time have been established.

If this shall not have been done, the Board will proceed to make a further revision of rates on general merchandise after giving due notice to the railroad company and to all interested parties. Of course other parties may desire to be heard besides those that have appeared. Only a few parties have sought to be heard, and they have not presented their case with full detail.

The orders of the Board, so far as rates have been revised, duly certified by the clerk, are annexed to this report. If compliance with any of these orders shall make any existing rate unlawful under any statute of either State, the railroad managers will of course reduce such rate so that it may conform to law.

Finally, it was shown that after the hearing at Lee, and at the time of the partial submission of the company, orders were given to deliver no freight in Lee except upon payment on delivery. The former practice had been to give credit to all responsible persons, and to send the bills twice a month. The practice of compelling payment on delivery, as we learn, is still in force. This order, coming, as it was said by the station agent, directly from the president, and applying only to Lee, covered all Lee merchants, and is enforced against men whose credit is admitted to be above suspicion. Legally the corporation has a right to do this. But it is plain that it was intended as a punishment of those who had dared to seek redress for a grievance in the manner pointed out by law. And the Board recommends to the president and directors that there be no further attempt to use their great powers for the annoyance, punishment or intimidation of any witness or any petitioner. Franchises are not granted that they may be exercised in this manner. And the power of the State to control railroad corporations has not been exhausted."

We give a copy of one of the notes referred to above, addressed to a responsible merchant and a man of good credit. One was also sent to a member of the last General Court, whose nancial standing was admitted to be excellent.

## HOUSATONIC RAILROAD COMPANY.

LEE STATION, May 30, 1885.

F. M. PEASE, ESQ.

MY DEAR SIR:—I am directed by the Hon. W. H. Barnum, President of the Housatonic Railroad Company to collect all freight bills on delivery of the goods, beginning the 1st prox.

Our new billing will commence on the above date, taking effect April 1st.

I am yours very truly

E. L. COGSWELL, *Agent.*

When the notes were introduced, President Barnum took the stand and testified that he had not authorized them. The Board then called for the Lee station agent to testify; and his brother (the general freight agent of the railroad company) promised that he should attend at 2 P. M., the hour of the afternoon session. When the time came, he was not present, and we were informed that he had “gone to drive.” The Board then gave notice that they would remain in session, adjourning from time to time, until the witness could be summoned and heard. Upon this, he appeared, and testified that he issued the notice in obedience to a letter received from President Barnum, but that he had mislaid the letter. Hereupon Mr. Barnum withdrew his denial, and admitted that he sent the order. This admission he has since withdrawn. But we are satisfied that he did give the order, and that his object was to use his power as President to punish those who appealed to the laws of Massachusetts for redress.

The table of rates fixed is given in the appendix.

The report and orders as to rates were sent to the company, who conformed so far and so far only as coal rates were concerned.

The parties interested forbore by agreement to present any case until October 1st. After this, failing to obtain redress they informed the Board that the law had been repeatedly and habitually violated; and the company was notified of a hearing on the 22d of October.

At the hearing, the President of the corporation stated that orders had been given to conform to all the rates fixed by the Board, except those relating to rates on materials and products of manufactures between Bridgeport and points in Massachu-

setts, and that these orders of the railroad company were dated back to October 1, with rebates where payments of freight had been made. This has been faithfully done. But the chief matter remains untouched. And the company, claiming that the act of 1885 is unconstitutional, declines to comply with the orders, so far as these rates are concerned.

The chief objection to the law, as we understand, is that it is supposed to interfere with the exclusive right of Congress to legislate for the regulation of interstate commerce. And our answer to this is now, as before, that the precise point has been decided by the supreme court of the United States, which is the highest authority on a question of constitutional law.

In this case a State law was sustained which, in the words of Chief Justice Waite, fixed rates for passengers and freight "taken up outside the State and brought within it, or taken up inside and carried without."

It is true that the law as laid down by Chief Justice Waite has been once more overruled by the supreme court of Iowa. And as we had occasion to remark before when commenting upon another like decision in Iowa, there is no recourse to the United States Court from the decision of the supreme court of a State annulling State legislation on the ground that it is void as conflicting with the United States Constitution. But nevertheless, until the supreme court of the United States shall reverse its own decision, it is binding upon us. Such a reversal is possible, and that the railroad company has an undoubted right to ask for it.

If the Peik case shall ever be revised, and if the law is seriously changed by the court, it will give new impetus to the demand for direct congressional interference with the rates and other details of interstate commerce, — legislation, of which no one can foresee the results. And its advocates could point to no stronger illustration of its necessity than that of a railroad company, admitting by its President that its rates were "excessive" "exorbitant," fifty per cent. more than "just," and yet defying the law of the State under which it holds a franchise, when that law only seeks to fix the rate at what the President has sworn to be a "just, reasonable and paying rate."

The corporation also claims that the act of the legislature is unconstitutional because the charter of the Stockbridge & Pitts-



field Railroad Company (1847) whose franchises are now vested in the Housatonic, contains a provision in section 7, that its rates may be revised, provided the profits are not reduced to less than ten per cent., and it is claimed that this special provision overrides in this respect, the general provision that all charters since March 11, 1831, are subject to alteration and amendment as well as to repeal. It is claimed, in addition, that section 180 of chapter 112, subjecting all railroad charges to revision and alteration, notwithstanding anything to the contrary in its charter, is unconstitutional so far as it applies to such a charter as that of the Stockbridge & Pittsfield.

These views would seem to conflict with the long line of decisions, which hold that the right to alter and amend is absolute and constitutes an express contract between the State and the corporation. Our supreme court has said that the effect of the general law is the same as if each charter had contained an express condition that it should at all times be subject to amendment or alteration at the pleasure of the Legislature. But it does not seem desirable to discuss this point. This Board may well assume that the State law is valid and leave it to the court of final jurisdiction to decide otherwise if it prove to be unconstitutional.

The Board, after due notice, placed the matter, as it is bound by law to do, in the hands of the Attorney-General; and under his direction the District Attorney for the Western District has brought a suit to recover penalties for violations of law by the Housatonic Railroad Company.

The Board would only add, while the company conforms to the rates fixed between points in the State, we are sure that some of the rates, when taken by themselves can be criticised with plausibility as being exceedingly low, and if taken as standards of comparison for rates elsewhere they might mislead the judgment. This arises from the fact already stated, that the Board conformed to the practice established by the company and acquiesced in by all its customers of treating the various places where paper mills and other factories are situated as one point, with equal rates. It is evident that taking the whole business together, the places which paid too much for north-bound freight would have their rates reduced on south-bound traffic, and *vice versa*. And thus on the whole

all would fare alike. At all events, the President of the company publicly requested that this existing system should be followed by the Board in their order; and no one objected. It will therefore be an unfair and misleading criticism if the rate from Ashley Falls or Sheffield to Pittsfield should be singled out as of itself too low, without considering the rates ordered between these points and Bridgeport, and all the other rates covered by our orders.

It has been said that the rates fixed by the Board allow a small package of 100 pounds or less to be carried at an absurdly low rate. But the Board was dealing with this subject practically. Its action in this respect was confined to the materials and products of manufacturers. It took the tariff rates as it found them and reduced them as appeared just. We do not believe that any manufacturer or dealer is in the habit of sending or receiving materials or manufactures in minute packages. If such a practice ever arises, the Board is ready, under the law, to hear any complaint, and to revise its rates as justice shall demand. No application for such revision has ever been made.

The Board cannot hope that all the rates fixed by it are correct. We know the difficulty which is felt when experienced freight managers try to adjust a tariff. In this very case, the skilful freight agent of the Housatonic adopted a provisional tariff for general freight, so that it might be revised after it had been proved by its working. We have never claimed, but have always denied, that a railroad commission was a proper tribunal for fixing tariffs. It is only to be resorted to as a choice of evils in preference to managers who recklessly disregard the rights of the public or even seek maliciously to annoy and injure their customers. The Board acted also under the disadvantage of receiving little help from the petitioners, and none from the railroad company. The only suggestion made, that as to the uniformity of rates for the several points in the valley, was adopted as set forth above; and finally, the Board has the power and is ready to exercise it, of revising any rate, which operates unjustly upon the corporation. No such application has been received. Other questions are still pending between the Housatonic Railroad Company and some of its customers. So far as they depend upon the constitutional questions pending in the courts, it seems desirable to await a decision.



One question of alleged preference is in process of hearing upon written statements. Informal complaints are made that the rates fixed by the Board are evaded by illegal and excessive charges, which swell the cost of transportation. But no such proof has been furnished as enables the Board to judge of the justice of these complaints.

During the year more than the usual variety and number of questions have been brought before the Board. Decisions upon the most important of these matters will be found in the Appendix. Among them is one relating to the withdrawal of reduced rates for scholars travelling between Medford and Boston. In this case, the Boston & Maine Railroad declined to follow the recommendation of the Board that the long-established practice of allowing such reduced rates should be continued. Their reply, with the statements of the president, seems to show that the directors contemplate a more general departure from the time-honored usage in this respect.

When such a movement is made, it is probable that much on both sides of the question will be added to the discussion. Our duty under the statute is fulfilled by laying the facts before the General Court. We only desire to add that we have not proposed any innovation, but have resisted one. We have simply counselled this corporation to continue a system which it has practised for more than twenty years; which still prevails on the other railroads of the State, and which prevails to-day on other portions of the Boston & Maine, including the Eastern Railroad.

#### TRANSPORTATION OF STOCK.

A peculiarly interesting matter was referred to the Board by the Railroad Committee of last winter. This related to the transportation of live stock, and especially of young animals intended for the improvement of the breed. Extracts from the decision will explain the questions; and they are given here in order to present the matter in advance of the printing of the Appendix: —

“The need of application to any tribunal in this case arises from the fact that while the rate of transportation is of interest to a large

number of farmers scattered over the whole State, and while the aggregate results are of great interest to the community, each individual transaction seems insignificant, so that in treating for rates the farmers find it hard to secure a respectful hearing. To gentlemen dealing with a 'great volume of traffic' and conversant with through rates it seems a small thing to fix a fair price for conveying a young Jersey or Ayrshire from one farm to another, especially as this is not a desirable class of freight. But the Commonwealth looks to just such 'petty affairs' with care, and has taxed her people to promote just such interests. Here the parties do not ask bounty or favor, but simple justice."

"The chief grievance was the rate for carrying young neat cattle, which are rated as adults at a very early age. And all the stock raisers present declared that it was a serious obstacle to the improvement of stock in this State. Even when these gentlemen were willing to give away calves of good stock, as they often did, the farmer frequently declined the gift, because he could not afford to pay for transportation. Such a fact throws light upon the motives of the complainants, as well as upon the effect of the rates complained of. One of the witnesses also stated that he could obtain fair prices for himself by his influence as a large shipper of other merchandize. He sought for others the same rates that he could obtain. Such men deserve an attentive and respectful hearing."

"The Board recommends for all young animals graded rates dependent upon weight. This will be just in each case, and therefore satisfactory. And it is hoped that by agreement on the part of the New England freight agents for different roads, and assented to by their respective companies, these rates may be extended to points far beyond the jurisdiction of this Board. No objection was made to the conventional weights adopted for full-grown animals. The charges for 'crated' animals are satisfactory and should not be substantially changed. Of course rates should be set forth as they will finally be given. And the amount to be paid should not be fixed by a long correspondence, but should be ascertained by inspection of the tariff."

It should be added that the petitioners expressed entire satisfaction with the rates and practice of the Fitchburg and Old Colony roads.

At a late day the Board were informed that these recommendations had not been fully accepted, and that further action was thought necessary by some of the leading breeders of im-

proved stock. Circulars were at once issued; but at this busy season full information cannot be obtained, nor can any full report be made as to the extent to which railroad managers have conformed to our suggestions.

So far as we have learned the facts, the difficulty lies with lines that extend beyond State limits and State jurisdiction. Even the legislature cannot fix the tariff for transporting freight over Long Island Sound, between a point in Connecticut and a point in New York. But it would be wise for freight agents and other railroad managers to use their influence in endeavoring to obtain reasonable rates from connecting lines, whether by land or water, for the service rendered to men whose chief object in pursuing their business is not gain for themselves, but benefit to the community. Railroad managers should be as diligent in their efforts to serve such an interest, as they are in seeking an increase of traffic and of gain. Above all, it is unwise to limit their efforts to accommodate the public by the narrow bounds of direct legal jurisdiction. It is wise to forestall applications for congressional action by securing in advance the removal of grievances which the State cannot redress.

The question is sometimes asked in regard to some supposed grievance, "Why do not the Railroad Commissioners set this right?" The answer in many cases is, "Because no one has requested the Commissioners to act." In regard to any defect in equipment, or to any faulty practice, resulting in danger to the public, the Board acts on its own motion, and privately or publicly calls the attention of railroad managers to the existence of the evil. But in regard to mere inconvenience, or want of facilities, it seems wise to wait for some complaint. Herein we follow the approved method of our predecessors on the Board. We quote from the Report of 1875, p. 32:—

"If the people on the line of any given road did not care enough to waste even a postal card in forwarding a complaint, on what possible ground could this Board maintain the existence of a grievous nuisance? The Commissioners cannot too frequently, or too forcibly, remind both the legislature and the public that their chief power rests in the public feeling which they may at any time represent. Railroad corporations, as a rule, care but little for abstract principles, nor

do they alter their methods of procedure in response to every suggestion, even from official quarters; they are, on the other hand, very sensitive to public opinion, and they invariably yield to it when they feel that it is concentrated and persistent. To facilitate its concentration, and to impart consistency to it, must always remain a very important, and perhaps the most useful function of this Board. A great step in the direction of many generally desired reforms would be secured, if this fact were more fully appreciated by that very large class of persons who now continually vent their sense of injury against the corporations, either through loud but aimless denunciation, or through anonymous, and consequently futile communications to the public press."

Numerous as the reported decisions are, they contain only a small percentage of the matters submitted to the Board, and settled with its aid. As a general rule, the managers of railroads have, as heretofore, been found ready to listen to the reasonable requests of the public, and to accept the advice of the Board tendered in their behalf.

Many matters have come before the Commissioners which do not properly belong to their jurisdiction, and which ought to have been settled without recourse to them. We give one case as a sample of many. A respectable Boston importer, living at a distance of twenty miles from the city, had lost his season ticket shortly after buying it. The ticket was registered, and contained his name, so that it could not be used by anyone else. Applying at headquarters for a renewal of the ticket, he was received by a subordinate, who not only refused him redress, but treated him with insult. A letter from a member of the Board procured courteous attention and prompt relief. We were not surprised to learn that the manager of the road felt that the case ought not to have been carried to the Board. But certainly it was not the fault either of the Commissioners, or of the petitioner, that he was obliged to take this course. A visitor with a grievance, or with a request, is not obliged to spend his time in ascertaining, by repeated experiments, who the official is that will hear him courteously and deal with him justly. Proper attention to little matters does much to promote good feeling, and to establish desirable relations between a railroad company and its customers.



## TROY &amp; GREENFIELD RAILROAD.

The annual hearing by the Board, under the contract with the Fitchburg Railroad Company for operating the State road, showed the following result for the year ending Sept. 30, 1884:—

Gross revenue, . . . . .	\$481,789 29
Gross earnings, . . . . .	427,342 41
Expenses, . . . . .	232,432 91
Balance due the State, . . . . .	194,909 50
Amount already paid the State by the Fitchburg R. R. Co.,	211,137 63
Amount overpaid, . . . . .	16,228 13

The operating expenses are 54.39 per cent. of the gross earnings, against 50.295 the previous year. This percentage applies by contracts to the other railroad companies engaged in operating the State road. The Fitchburg Railroad Company claimed as expenses \$241,107.31, which would have entitled it to 56.42 per cent. of the gross earnings of \$427,342.41. An appeal from the award of the Board has been claimed, but it has not as yet been prosecuted.

Other questions between the Commonwealth and the Fitchburg Railroad Company, growing out of their relations to the State road, have been heard before the Board. The relief of all parties from such hearings will be the smallest of the benefits that will result when the State finally retires from its connection with this commercial enterprise.

## RELIEF AND PENSION FUND.

The Board believes that this is an opportune time for calling the attention of the General Court to the need of legislation sanctioning the co-operation of railroad companies with their employees, in the formation and management of funds for the relief of men disabled by accident or disease, and for pensions to the aged, and to the families of those dying in their service. We can best do this by repeating in substance what we have already said in the Report of 1881.

Most railroad men agree that it is desirable to have some



method by which the employees of large railroad corporations can be insured in case of accident and death, and have pensions when disabled or superannuated. Many methods have been tried, and the subject has been heretofore discussed in the reports of this Board.

There are various advantages in having the co-operation of the railroad company with its men in carrying out such a project. Relief, which is now given irregularly, without the sanction of law, and as an act of charity, will then be afforded as a right, and under a system. It is believed that such a system will improve the relations between the corporation and its men, that it will improve the character of the service, and tend to make it more permanent. It is well known that in a large class of accidents the law gives no claim to the injured employee against the company; and no one has ever proposed to make every accident a ground of action; it is as well known that in many such cases a claim founded in equity or in pity is practically acknowledged, and that such claims are satisfied without much regard to legal considerations. Those who are engaged in the hazardous work of train-men ought to be insured against accident and death; and, if the insurance business is assumed by the railroad company, the expense of insurance companies is avoided, including the immense cost of agencies and commissions. So far as this is a burden to the company, the testimony of eminent railroad managers is, that it is fully justified by the increased efficiency and better *morale* of the force.

In the case of a faithful servant who, after long years, becomes incapable of further service, the law gives no claim, and would not even allow a pension to be paid; but many railroad companies do recognize the fact that it is a fair and proper thing to reward fidelity and good service by giving a sinecure place to an aged employee, or in some other way contributing to his support.

Perhaps the best mode of illustrating the subject is to state what has been done by one great corporation in this country. The Baltimore & Ohio Railroad Company began by subscribing one hundred thousand dollars as the nucleus of a relief fund, and assumed all the clerical and office work connected with it.

All new employees are engaged on condition of becoming subscribers; all who were in the service had the option of doing so. They are divided into two classes, — those operating rolling stock, and those not so engaged. The first class contribute as follows: Those receiving thirty-five dollars or less a month, one dollar a month, with a right to one benefit; those receiving between thirty-five and fifty dollars per month give two dollars a month, with right to two benefits; and so on till those are reached who receive over one hundred dollars per month. They give five dollars per month, and receive five benefits. The second class pay twenty-five per cent. less, and receive the same amount of benefits as the first class. Officials receiving high salaries, and running no risks, may participate or not, as they please.

These funds are managed by a board chosen in part by the contributors, and in part by the directors of the corporation; and payment is made as follows: —

1. In case of temporary disablement in railroad service, a daily allowance, payable monthly, for not more than six months.

2. In case of permanent disablement so caused, preventing the employee from earning a living, a monthly payment while the disability continues.

3. In case of death while in discharge of duty, the payment of a specified sum to the person who has been designated to receive it, or to the legal representative of the deceased.

4. In case of sickness or accident not in the discharge of duty, causing inability to labor, a monthly payment for not more than a year.

5. In case of death not caused by accident in the discharge of duty, a specified sum to the person designated, or to the legal representative.

One benefit under the first clause is fifty cents per day; under the second, twenty-five cents per day. Under the third, a benefit amounts to five hundred dollars; under the fourth clause, it is fifty cents daily; and under the fifth, it is one hundred dollars.

Contributors will be entitled to a greater number of benefits

on paying the corresponding rates. Contributions are deducted from the monthly wages, and thus payment becomes easy. Free medical attendance is also furnished to contributors. An annuity fund is also connected with this scheme, in which employees may share by contributing thereto. This entitles every contributor to one and one-half times the amount contributed by him, in case of death, before reaching the age of sixty-five; or, if he survives that age, he receives one dollar each year for every ten dollars paid, and one half-dollar more on each ten for every year his contributions have continued.

This plan is in full operation, and gives complete satisfaction to the employees and to the managers of the railroad. Like systems with various modifications exist on many roads. All plans, of course, provide for the withdrawal of deposits, or of some portion of them, at the option of each contributor. One desirable modification is that of advancing from the treasury of the company each month a sum equal to that contributed by all the employees, or having some fixed relation to it, instead of a gross sum.

#### *Good Service Fund.*

It has been proposed to extend the scope of the system by providing rewards for faithful service, and special rewards for special service; and it has been thought possible to make the fund for such payments dependent in part on the profits of the corporation by adding to the fund a fixed per cent. of the surplus of net earnings over a sum fixed for dividends, so that every employee should have a contingent interest in the prosperity of the road. This principle has been to some extent applied on a French railroad. There wages of certain employees were raised in proportion to the decrease of certain current expenses.

It may be a question whether a union of relief funds and of good service fund could be made without too much complication.

Matters of detail, however, need not be discussed, as they would probably be different on different roads, and they may well be left to the judgment of the managers and employees. Legislation seems to be needed, because strict construction of

law might forbid the proposed contracts as *ultra vires*; for it might be said no power had been given to railroad companies to form the sort of partnership necessary for founding and holding a relief fund. Probably legislation would also be desired to protect such funds from the creditors of railroad companies, and creditors of the employees.

Since 1881, the continued and extended operation of this system by the Baltimore & Ohio Railroad Company has furnished additional arguments in its favor. And the facts have recently been set forth in the "Popular Science Monthly" by Dr. W. T. Barnard of that company. It seems needless to refer to any foreign experience, when we have the results of an experiment tried upon a large scale in our own country. Nor is it necessary to consider theoretical objections, however plausible, when they have been answered by the complete success of a scheme in which 18,000 persons have constantly participated, and under which nearly a million of dollars has within five years been distributed with satisfaction to all concerned.

We do not suggest that in acting upon this subject, the legislature should in any way deal with the vexed subject of employers' liabilities, — a matter far beyond our jurisdiction, and involving other than railroad interests. The action which we would recommend would apply to railroad companies under the law as it now is, or under any possible modifications. The rules of the proposed relief association would be applicable, as those of the Baltimore & Ohio associations are, to cases arising under differing laws of more than one State.

We believe that under any form of law as to liability, the system of relief proposed would greatly benefit the men employed on railroads, not only directly, but by saving expense in litigation and otherwise. And by improving the position of employees we are confident that better service will be secured to the railroads, and that one result will be greater security to travellers. And we share the hope expressed by a writer to whom we have referred already, that under this system something may be done toward the solution of the greatest question now pending before the world: the equitable adjustment of the relations between capital and labor.

We therefore earnestly recommend the passage of an act legalizing the formation under general law of associations for the relief of railroad employees, and for protecting the funds held by such associations upon a system similar in the main to that adopted by the Baltimore & Ohio Railroad Company.

THOMAS RUSSELL,  
EDWARD W. KINSLEY,  
EVERETT A. STEVENS,

*Railroad Commissioners.*

DEC. 31, 1885.



## SPECIAL REPORT

UNDER RESOLVE CHAPTER 69 OF 1885.

RESOLVE authorizing the Railroad Commissioners to make inquiries concerning the passenger and freight charges of the Hudson River Bridge Company at Albany.

WHEREAS, The traffic between this Commonwealth and the West is said to be unjustly taxed and discriminated against by the Hudson River Bridge Company at Albany, therefore:—

*Resolved*, That the Railroad Commissioners are hereby authorized and requested to inquire and ascertain, as far as possible, and report to the next General Court, what charges are made by said Hudson River Bridge Company at Albany for transporting freight and passengers over its bridge at Albany, and whether any discrimination is practised in such transportation. [*Approved June 18, 1885.*]

The Board would respectfully report that they have made all the inquiries possible as to the subject referred to them. The want of jurisdiction over the affairs of a foreign corporation operating a bridge in another State has prevented a full investigation, and has made impossible a wholly satisfactory result. We annex letters which are our main sources of knowledge upon the subject. The officers of the Boston & Albany R. R. Co. have given us all the information that they possess, but whether the practice of the Bridge Company has always been in accordance with its rules neither they nor the Board can certify:—

## LETTER FROM THE GENERAL COUNSEL OF THE BOSTON &amp; ALBANY R. R. CO.

THE BOSTON & ALBANY RAILROAD COMPANY.  
OFFICE OF THE GENERAL COUNSEL,

BOSTON, May 2, 1885.

Hon THOMAS RUSSELL,

DEAR JUDGE:—In reply to your inquiries of this morning: The bridge at Albany is owned by a New York corporation. The rate of tolls was originally fixed by the directors, and was, as the law

required, approved by the Canal Board. Since then the only changes of tolls have been to lower them.

The terminus of the B. & A. Railroad is on the east side of the river. The only railroads that extend to the bridge are the B. & A., and the N. Y. C. & H. R. This corporation is not aware of any discrimination in the tolls in favor of any corporation. Any other railroad than N. Y. C. & H. R. in order to reach the bridge from the west, would have to cross the yard and grounds of the N. Y. C. & Hudson River road, on such terms as it could make with that corporation. I think this answers your questions.

Yours truly,

A. L. SOULE.

# LETTER FROM PRESIDENT BLISS OF THE B. & A. R. R. CO.

THE BOSTON & ALBANY RAILROAD COMPANY.

OFFICE OF THE PRESIDENT,

BOSTON, Nov. 3, 1885.

DEAR SIR:—I have received your note of to-day. The Hudson River Bridge Company is a New York corporation, as you know. This company does not control it.

I do not speak with authority, but as far as I know no discrimination whatever is made by it.

All through freight is carried over the bridge absolutely free, and as substantially all the business between the West and points on this road and lines tributary to it is done on through bills of lading and contracts, evidently there can be no discrimination on it.

On coal passing over the bridge there is a charge of 10 cents per ton, and all companies are treated alike so far as I know.

On passengers there is a charge of 10 cents each for those carried by railroad 30 miles or more, and 5 cents for all those carried under 30 miles.

Yours truly,

WM. BLISS.

Hon. T. RUSSELL.

*Chairman Board of R. R. Commissioners, Boston.*

## LETTER FROM THE TREASURER OF THE BRIDGE COMPANY.

OFFICE OF THE HUDSON RIVER BRIDGE COMPANY AT ALBANY.

August 10, 1885.

DEAR SIR:—Your letter to me, dated July 3, was received here in my absence. This is my excuse for not answering it sooner.

The R. R. Co.'s pay the Bridge Co. *nothing* for tolls on freight or passengers. The only income of the Bridge Co. from tolls, is from foot passengers. The N. Y. C. & H. R. R. Co. and the B. & A. R. R. Co. are the sole owners of the property of the Bridge Co., the former having  $\frac{3}{4}$  and the other  $\frac{1}{4}$  interest in the property. I think the two companies use the bridges just about in proportion to their several interests; and they use them, as they do the bridges across the Mohawk at Schenectady, and across the Connecticut at Springfield, discriminating against, favoring no section, at the cost of another; but striving to get a living by serving the public honestly and impartially.

Yours truly,

S. T. FAIRCHILD,

*Treasurer of Bridge Company.*

Hon. THOMAS RUSSELL,

*Chairman of Mass. Board of R. R. Commissioners.*

## LETTER OF JOHN B. HULL, JULY 11.

STOCKBRIDGE, July 11, 1885.

*Massachusetts Railroad Commissioners.*

GENTLEMEN:—As requested I send you substance of a letter with regard to coal rates via West Shore and Boston & Albany Railroad.

Having arranged with West Shore Railroad for rate, Newburgh to Albany 70 cents per ton, and been advised by West Shore that transfer charges to Boston & Albany Railroad would be \$2 per car, I ordered coal via that route, but before shipments were made I was notified by West Shore Railroad that they had received notice that transfer charges would be \$9 per car; viz., \$4 switching, and \$5 for bridge tolls.

Very truly yours,

JOHN B. HULL.

C. E. H.

It would seem that the absorption of the West Shore Railroad by the New York Central must have ended the special discrimination complained of. We are unable to learn that any like practice as to any other road now exists.

THOMAS RUSSELL,  
EDWARD W. KINSLEY,  
EVERETT A. STEVENS,

*Railroad Commissioners.*

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## APPENDIX.

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[A.]  
Receipts of Flour in Boston during Ten Years, ending Sept. 30.

FLOUR—BARRELS.										
	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Boston & Albany Railroad,	795,155	830,514	784,149	536,767	462,852	629,355	569,692	699,553	610,673	667,148
Boston & Lowell Railroad,	214,664	138,914	121,416	191,265	236,443	160,704	104,376	133,491	132,825	186,304
Fitchburg Railroad,	58,592	129,687	248,566	478,852	549,354	869,971	777,466	1,208,605	1,514,586	1,172,335
Grand Junction (B. & A. R. R.),	273,789	364,377	447,518	600,184	936,783	911,357	668,133	1,110,564	1,107,960	1,193,323
N. Y. & New England R. R.,	-	-	-	89,327	89,542	190,169	227,576	331,391	278,944	101,214
Total by through lines from West,	1,342,191	1,463,492	1,601,649	1,896,395	2,274,974	2,761,556	2,347,243	3,543,604	3,642,788	3,320,324
Boston & Maine Railroad,	38,942	43,935	32,092	42,631	28,361	29,227	13,343	16,126	9,383	1,462
Boston & Providence R. R.,	35,406	11,679	3,084	1,387	4,421	4,241	3,588	5,548	1,876	349
Eastern Railroad,	-	-	-	2,985	6,064	11,335	4,732	9,950	11,776	1,580
Old Colony Railroad,	2,375	841	2,685	2,162	3,392	3,646	5,115	4,390	3,218	1,941
Portland Steamer,	3,597	2,299	220	182	150	1,893	352	459	187	25
New York Steamer,	129,190	132,062	111,083	120,382	80,125	18,642	2,121	991	6,130	1,857
Baltimore Steamer,	71,108	40,496	20,047	9,364	15,941	16,162	4,907	7,562	21,648	12,574
Philadelphia Steamer,	12,348	7,069	5,053	1,045	1,022	300	1,625	10	1,370	250
New Orleans Steamer,	-	-	-	-	697	-	-	225	-	-
Sail-Vessels,	100	1,200	1,310	300	400	-	-	1,823	4,937	2,741
Other Sources,	-	-	-	-	-	-	-	-	-	-
Total from Seaboard,	293,066	239,581	175,574	180,438	140,573	85,646	35,783	47,084	62,725	22,779
Total from all Sources,	1,635,257	1,703,073	1,777,223	2,076,833	2,418,859	2,853,079	2,383,026	3,590,688	3,705,513	3,343,103

Decrease, 362,410 barrels,—9 per cent.

## Receipts of Corn in Boston during Ten Years, ending Sept. 30.

## CORN — BUSHELS.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Boston & Albany Railroad,	1,179,500	1,336,180	1,219,245	1,006,160	659,467	1,349,388	807,175	927,490	1,041,605	1,603,457
Boston and Lowell Railroad,	144,422	534,732	534,849	617,026	3,836,219	794,534	1,355,529	571,595	510,214	408,400
Fitchburg Railroad,	861,413	1,328,430	2,003,559	3,472,195	2,897,389	3,659,457	2,640,372	4,111,500	3,876,725	3,764,185
Grand Junction (B. & A. R. R.),	5,748,309	4,731,836	5,799,140	5,855,850	7,328,338	8,560,384	3,170,842	3,386,291	4,193,700	2,987,880
N. Y. & New England R. R.,	-	-	-	23,695	29,060	177,519	329,114	843,554	363,637	38,051
Total by through lines from West,	7,983,644	7,931,178	9,556,793	11,014,926	14,750,473	14,541,282	8,303,032	9,840,430	9,985,881	8,801,973
Boston & Maine Railroad,	14,443	49,657	70,599	144,295	202,752	257,841	255,295	305,077	124,635	6,150
Boston & Providence R.R.,	1,010	-	-	120	-	-	-	700	800	500
Eastern Railroad,	-	-	-	11,300	5,700	2,500	7,050	16,270	6,664	1,425
Old Colony Railroad,	-	-	-	-	-	-	7,650	5,300	5,450	500
Portland Steamer,	-	-	-	-	-	-	-	-	-	-
New York Steamer,	-	8,332	6,500	-	-	-	5,000	-	-	-
Baltimore Steamer,	5,536	6,086	1,492	6,400	76	-	10,811	15,712	32,942	6,498
Philadelphia Steamer,	18,730	6,766	8,682	-	-	-	-	-	-	-
New Orleans Steamer,	-	-	-	-	-	-	-	16,444	-	1,500
Sail-Vessels,	-	-	-	-	-	-	-	*72,891	5,416	-
Other Sources,	26,340	17,926	16,186	6,000	-	200	8,000	-	-	-
Total from Seaboard,	66,059	88,767	103,459	168,115	208,528	260,541	293,806	432,394	175,907	16,573
Total from all Sources,	7,999,703	8,019,495	9,660,252	11,183,041	14,959,001	14,801,823	8,596,838	10,272,824	10,161,788	8,818,546

Decrease, 1,343,242 bushels, — 13 per cent.

\* Savannah Steamer.

## Receipts of Oats in Boston during Ten Years, ending Sept. 30.

OATS — BUSHELS.										
	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Boston & Albany Railroad, .	841,413	791,638	656,349	728,634	604,310	1,094,476	1,411,900	1,332,825	1,754,628	2,170,405
Boston & Lowell Railroad, .	250,894	223,729	202,823	256,548	181,636	201,602	469,327	163,421	78,876	487,889
Fitchburg Railroad, .	1,195,267	1,718,324	1,807,810	1,828,720	1,994,597	1,751,469	1,615,072	2,734,844	3,124,318	2,877,370
Grand Junction (B. & A. R. R.),	431,000	416,190	377,400	592,235	720,454	663,000	472,450	558,200	702,250	463,700
N. Y. & New England R. R., .	-	-	-	22,500	32,341	46,650	163,000	93,118	85,260	33,722
Total by through lines from West, . . . . . }	2,718,574	3,149,881	3,044,372	3,428,787	3,533,338	3,757,197	4,131,749	4,882,408	5,745,332	6,033,086
Boston & Maine Railroad, .	7,896	12,796	53,433	23,350	46,442	21,050	103,875	28,403	5,925	7,575
Boston & Providence R. R., .	700	-	-	-	-	-	-	-	-	-
Eastern Railroad, . . . . .	-	-	-	5,700	12,950	8,100	138,835	20,005	7,100	400
Old Colony Railroad, . . . .	-	-	-	-	-	-	2,750	800	3,100	600
Portland Steamer, . . . . .	-	1,440	-	-	-	-	-	-	-	-
New York Steamer, . . . . .	-	-	-	-	-	-	-	-	-	-
Baltimore Steamer, . . . . .	-	1,300	-	-	-	-	-	-	1,437	-
Philadelphia Steamer, . . . .	-	4,566	-	-	-	-	-	-	-	-
New Orleans Steamer, . . . .	-	-	-	-	-	-	-	-	-	-
Sail-Vessels, . . . . . }	-	-	-	-	-	-	-	-	-	-
Other Sources, . . . . . }	-	-	-	-	-	-	-	-	-	2,968
Total from Seaboard, . . . .	8,596	20,092	53,433	29,050	59,392	29,150	245,460	49,205	17,562	11,543
Total from all Sources, . . .	2,727,170	3,169,973	3,097,805	3,457,787	3,592,730	3,786,347	4,377,209	4,931,613	5,762,894	6,044,629

Increase, 275,735 bushels, — .047 per cent.

## Receipts of Wheat in Boston during Ten Years, ending Sept. 30.

## WHEAT—BUSHELS.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Boston & Albany Railroad, .	137,373	264,275	130,618	174,310	65,691	50,525	28,700	36,005	24,900	91,855
Boston & Lowell Railroad, .	52,190	38,800	298,654	916,431	981,761	337,253	250,641	198,731	94,666	106,968
Fitchburg Railroad, .	22,205	50,870	233,416	1,306,085	724,743	994,446	918,763	990,289	842,662	1,193,555
Grand Junction (B. & A. R. R.),	223,600	678,380	3,441,910	2,753,450	2,436,921	2,832,769	1,458,400	1,037,170	722,100	871,300
N. Y. & New England R. R., .	-	-	-	7,568	34,232	955	175,400	295,100	103,074	-
Total by through lines from West, . . . . . }	435,368	1,032,325	4,104,598	5,157,844	4,243,348	4,215,948	2,831,904	2,557,295	1,787,402	2,263,678
Boston & Maine Railroad, .	-	112	400	27,448	53,522	23,932	37,884	17,957	10,400	-
Boston & Providence R. R., .	1,012	1,614	770	1,001	102	-	-	10,000	600	-
Eastern Railroad, . . . . . }	-	-	-	-	-	-	800	1,015	1,400	600
Old Colony Railroad, . . . . . }	-	-	-	-	-	-	500	-	-	-
Portland Steamer, . . . . . }	-	-	-	-	-	-	-	-	-	-
New York Steamer, . . . . . }	200	150	2,452	-	-	-	-	-	-	-
Baltimore Steamer, . . . . . }	4,175	163	-	-	-	-	-	-	-	-
Philadelphia Steamer, . . . . . }	-	-	-	-	-	-	-	-	-	-
New Orleans Steamer, . . . . . }	-	-	-	-	-	-	-	-	-	-
Sail-Vessels, . . . . . }	-	46,333	35,017	-	-	-	-	-	4,500	-
Other Sources, . . . . . }	-	-	-	-	-	-	-	-	-	-
Total from Seaboard, . . . . . }	5,387	48,372	38,639	28,449	53,624	23,932	39,184	28,972	16,900	600
Total from all Sources, . . . . . }	440,755	1,080,697	4,143,237	5,186,293	4,296,972	4,239,880	2,871,088	2,586,267	1,804,302	2,264,278

Increase, 459,976 bushels, — 25 + per cent.



*Total Passengers and Freight carried during Ten Years ending  
Sept. 30.*

	PASSENGERS.	TONS FREIGHT.
1876, . . . . .	41,133,229	11,327,502
1877, . . . . .	38,450,823	11,910,663
1878, . . . . .	37,318,427	12,186,545
1879, . . . . .	39,217,634	14,401,877
1880, . . . . .	45,151,152	17,221,567
1881, . . . . .	49,834,491	17,971,072
1882, . . . . .	55,868,694	19,061,164
1883, . . . . .	61,530,747	20,202,881
1884, . . . . .	66,517,265	20,273,920
1885, . . . . .	69,603,700	20,577,096

*Total Passengers carried to and from Boston, by Railroads, during  
Year ending Sept. 30, 1885.*

To Boston, . . . . .	17,552,892
From Boston, . . . . .	17,757,568

[B.]

*Tabular Statement of Accidents reported to the Board of Railroad Commissioners during Year ending Sept. 30, 1885.*

RAILROADS.	GENERAL STATEMENT.										PASSENGERS.				EMPLOYEES.			
	Whole Number of Persons Injured.	Passengers.	Employees.	At Highway Crossings and Stations.	Trespassers.	Children.	Adults.	Killed.	Injured.	By Causes beyond their own Control.		By their own Misconduct or Carelessness.		Train-Men.	Other Employees.	By Shackling or Unshackling Cars.	By Overhead Bridges.	
										Killed.	Injured.	Killed.	Injured.					
Boston & Albany,	156	17	86	12	41	9	147	40	116	-	-	2	15	78	8	34	3	
Boston & Lowell,	24	2	10	3	9	6	18	9	15	-	-	-	2	7	3	5	1	
Boston & Maine,*	74	20	22	11	21	4	70	25	49	-	2	3	15	16	6	5	3	
Boston & Providence,	20	-	6	4	10	3	17	10	10	-	-	-	-	5	1	1	1	
Fitchburg,†	92	17	48	5	22	3	89	23	69	-	8	2	7	45	3	24	2	
New York & New England,	37	8	16	1	12	-	37	6	31	-	1	1	6	11	5	9	1	
Old Colony,	46	5	25	5	11	-	46	18	28	-	-	4	1	18	7	3	-	
Boston, Winthrop & Shore,	1	1	-	2	-	-	1	1	-	-	-	1	-	-	-	-	-	
Cheshire,	2	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	
Connecticut River,	6	-	-	-	6	2	4	5	1	-	-	-	-	-	-	-	-	
Hanover Branch,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Milford & Woonsocket,	3	1	2	-	-	-	3	-	3	-	1	-	-	2	-	2	-	
Nantasket Beach,	1	-	-	-	1	-	1	2	1	-	-	-	-	-	3	2	-	
New Haven & Northampton,	5	-	4	-	1	-	5	2	3	-	-	-	-	1	1	-	-	
New London Northern,	1	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	
New York, New Haven & Hartford,	3	-	1	-	2	-	3	-	3	-	-	-	-	1	-	1	-	

Norwich & Worcester, . . .	3	-	2	-	2	1	2	-	-	-	-	-	2	-	-	-	-
Providence & Worcester, . .	14	2	2	2	13	5	9	-	-	-	-	-	2	-	1	1	-
Troy & Greenfield, . . .	16	1	11	2	16	6	10	-	-	1	-	-	6	5	1	2	-
Worcester, Nashua & Rochester,	3	-	2	-	3	1	2	-	-	-	-	-	2	-	-	-	-
Housatonic, of Connecticut, .	5	-	-	1	5	5	-	-	-	-	-	-	-	-	-	-	-
Boston, Revere Beach & Lynn, .	5	-	-	4	1	5	-	-	-	-	-	-	-	-	-	-	-
Grafton Centre, . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Martha's Vineyard, . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nantucket, . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worcester & Shrewsbury, . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	517	74	236	55	152	28	489	163	354	-	12	14	48	194	42	91	12

\* Including Eastern.

† Including Boston, Barre &amp; Gardner.

*Tabular Statement of Accidents, etc. — Concluded.*

RAILROADS.	EMPLOYEES — Concluded.					AT HIGHWAY CROSSINGS.				AT STATIONS.		TRESPASSERS.				
	By Train Accidents.	Falling from Train or Engine.	Various Causes. <sup>a</sup>	Killed.	Injured.	With Gates or Flag-man.	Without Gates or Flagman. <sup>b</sup>	Killed.	Injured.	Killed.	Injured.	Unlawfully on Track.	Unlawfully on Cars.	Killed.	Injured.	Suicide.
Boston & Albany, . . . . .	3	20	26	7	79	4	7	4	7	1	—	29	13	25	16	—
Boston & Lowell, . . . . .	—	4	—	3	7	2	1	1	2	—	—	6	3	5	4	—
Boston & Maine,* . . . . .	3	2	8	4	18	5	4	4	5	—	2	18	3	15	6	—
Boston & Providence, . . . . .	1	1	2	1	5	1	3	3	1	—	—	7	3	6	4	—
Fitchburg,† . . . . .	6	5	11	5	43	1	3	1	3	—	1	19	3	11	11	—
New York & New England, . . . . .	1	5	5	1	15	1	1	1	1	—	—	10	2	5	7	—
Old Colony, . . . . .	5	7	7	4	18	2	3	2	3	—	—	7	4	7	4	—
Boston, Winthrop & Shore, . . . . .	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—
Cheshire, . . . . .	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—
Connecticut River, . . . . .	—	—	—	—	—	—	—	—	—	—	—	5	1	5	1	—
Hanover Branch, . . . . .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Milford & Woonsocket, . . . . .	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
Nantasket Beach, . . . . .	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—
New Haven & Northampton, . . . . .	—	—	2	1	3	—	—	—	—	—	—	1	—	1	—	—
New London Northern, . . . . .	—	—	1	—	1	—	—	—	—	—	—	2	—	—	2	—
New York, New Haven & Hartford, . . . . .	—	—	—	—	1	—	—	—	—	—	—	2	—	—	1	—
Norwich & Worcester, . . . . .	—	—	—	—	—	—	1	—	1	—	—	2	—	1	2	—
Providence & Worcester, . . . . .	—	—	1	—	2	—	4	1	3	—	—	6	1	4	2	—
Troy & Greenfield, . . . . .	—	3	6	3	8	—	2	2	—	—	—	1	—	2	—	—
Worcester, Nashua & Rochester, . . . . .	—	—	—	—	2	—	—	—	—	—	—	1	—	1	—	—

Housatonic, of Connecticut,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boston, Revere Beach & Lynn,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grafton Centre,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Martha's Vineyard,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nantucket,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Worcester & Shrewsbury,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22	42	69	29	207	20	30	23	27	1	3	120	32	93	59	3	3

*a* Including struck by car in yard, 13; thrown from hand-car, 6; jumping from engine or train, 6; crossing or walking on track, 5; falling upon track, 4; going from box car to platform car, 2; breaking of lever on snow-plow, 2; collision of cars with car they were repairing, 2; contact with switch stand, etc., 3; scalded, 2; head caught between Miller platforms when coupling air-hose, 1.

*b* At private crossings, 3.

c By collision with velocipede car.

\* Including Eastern.

† Including Boston, Barre and Gardner.



*Train Accidents Reported to the Board of Railroad Commissioners  
during the Year ending Sept. 30, 1885.*

ACCIDENTS.	Number of Acci- dents.	Persons Killed.	Persons Injured.
<b>COLLISIONS.</b>			
<i>Rear.</i>			
Passenger train with empty passenger cars, which had run off from siding to main track, . . . . .	1	-	2
Passenger train with locomotive, by misplaced switch,	1	-	-
Passenger cars cut off for flying switch with the for- ward part of train, . . . . .	1	-	8
Passenger car in motion with train backing up to couple on, . . . . .	1	-	-
Empty passenger train with delayed freight train, .	1	-	2
<i>Butting.</i>			
Two passenger trains, . . . . .	2	-	3
Two freight trains, . . . . .	1	-	-
<i>Crossing.</i>			
Passenger train with freight train, . . . . .	1	-	-
	9	-	15
<b>DERAILMENTS.*</b>			
Freight trains, . . . . .	3	-	-
Train of dump cars, . . . . .	1	-	2
Engines, . . . . .	2	-	-
	6	-	2

\* Derailments causing slight damage, and not causing serious delay of passenger trains, are not reported.

*Tubular Statement of Accidents reported to the Board of Railroad Commissioners during Ten Years.*

	GENERAL STATEMENT.								PASSENGERS.				EMPLOYEES.		
	Whole Number of Casualties to Persons.	Passengers.	Employees.	At Highway Crossings and Stations.	Trespassers.	Children.	Adults.	Fatal.	Not Fatal.	From Causes beyond their own Control.	From their own Misconduct or Want of Care.	Fatal.	Not Fatal.	Train-men.	Other Employees.
Year ending Sept. 30, 1876,	231	39	62	41	89	29	202	114	117	4	35	10	29	43	19
“ “ 1877,	274	33	95	37	109	26	248	134	140	9	24	7	26	65	30
“ “ 1878,	304	38	96	37	133	37	267	150	154	2	36	10	28	68	28
“ “ 1879,	405	208	83	32	82	25	380	115	290	186	23	21	188	71	12
“ “ 1880,	346	24	157	54	111	24	322	146	200	1	23	9	15	113	44
“ “ 1881,	415	42	200	47	126	23	392	184	231	11	31	15	27	167	33
“ “ 1882,	414	27	198	57	132	29	385	163	251	4	22	9	15	158	40
“ “ 1883,	524	61	266	50	147	33	491	191	333	1	24	14	21	192	73
“ “ 1884,	457	76	182	38	161	33	424	181	276	44	32	14	62	139	43
“ “ 1885,	517	74	233	55	152	28	486	163	351	12	62	14	60	191	42
Total, . . . . .	3,887	622	1,572	448	1,242	317	3,597	1,541	2,343	274	312	123	471	1,187	364
Average, . . . . .	388.7	62.2	157.2	44.8	124.2	31.7	359.7	154.1	234.3	27.4	31.2	12.3	47.1	118.7	36.4

*Tabular Statement of Accidents, etc., during Ten Years — Concluded.*

	EMPLOYEES — Concluded.							AT HIGHWAY CROSSINGS.				AT STATIONS.		TRESPASSERS.				
	Coupling or un- coupling Cars.	By Overhead Bridge.	By Train Ac- cidents.	Falling from Train.	Various Causes.	Fatal.	Not Fatal.	With Gates or Flagman.	Without Gates or Flagman.	Fatal.	Not Fatal.	Fatal.	Not Fatal.	Walking or Ly- ing on Track.	Unlawfully Riding on Cars.	Fatal.	Not Fatal.	Suicide.
Year ending Sept. 30, 1876,	20	6	8	12	16	29	33	14	24	13	25	3	—	64	25	59	30	—
“ “ 1877,	25	5	21	18	26	35	60	12	21	19	14	2	2	79	30	71	38	8
“ “ 1878,	24	10	15	15	32	34	62	12	17	20	9	3	5	102	31	84	49	3
“ “ 1879,	25	7	8	24	19	28	55	13	17	13	17	1	1	70	12	54	28	5
“ “ 1880,	43	12	21	47	34	49	108	20	30	19	31	1	3	93	18	72	40	4
“ “ 1881,	59	28	18	46	48	72	128	12	24	11	25	5	6	104	22	81	45	3
“ “ 1882,	60	18	15	43	62	56	142	25	29	21	33	3	—	109	23	75	57	7
“ “ 1883,	86	14	13	55	97	62	203	18	26	15	29	4	2	112	33	93	54	3
“ “ 1884,	68	12	11	35	56	47	135	19	13	13	19	4	2	126	35	104	57	4
“ “ 1885,	91	10	19	42	70	29	204	20	30	23	27	1	3	120	32	93	59	3
Total, . . . . .	501	122	149	337	460	441	1,130	165	231	167	229	27	24	979	261	805	457	40
Average, . . . . .	50.1	12.2	14.9	33.7	46.0	44.1	113.0	16.5	23.1	16.7	22.9	2.7	2.4	97.9	26.1	80.5	45.7	4.0

*Tabular Statement of Accidents to Employees in Massachusetts during Ten Years.*

YEAR ENDING SEPT. 30.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Injured by coupling cars, . . .	20	25	24	25	43	59	60	86	68	91
by overhead bridges, . . .	6	5	10	7	12	28	18	14	12	12
by train accidents, . . .	8	21	15	8	19	18	15	13	11	19
by falling from trains, . . .	12	18	15	24	47	46	43	55	35	42
by other causes, . . .	16	26	30	17	34	47	62	97	56	69
by explosion of locomotives, . . .	-	-	2	2	2	2	-	-	-	-
Totals, . . .	62	95	96	83	157	200	198	265	182	233





Spreading of rails,	.	.	.	.	.	5	7	2	6	9	5	4	2	3	2	5	4
Broken draw-head,	.	.	.	.	.	1	1	1	1	1	1	4	—	—	—	—	4
Wash-out of track,	.	.	.	.	.	3	3	1	2	1	—	—	1	—	5	1	21
Snow or ice,	.	.	.	.	.	—	—	1	9	20	—	—	—	—	—	—	30
Land-slide,	.	.	.	.	.	—	1	1	1	1	—	—	—	—	2	—	7
Rail out for repairs,	.	.	.	.	.	—	—	—	—	—	—	—	—	—	—	—	1
Wind (trains blown from track),	.	.	.	.	.	—	1	1	1	1	—	—	—	—	—	—	7
Broken switch-rod,	.	.	.	.	.	2	—	—	6	3	—	—	—	—	1	2	15
Misplaced switch, maliciously,	.	.	.	.	.	1	1	1	3	2	—	—	—	—	—	1	13
Rail removed maliciously,	.	.	.	.	.	3	1	1	—	2	—	—	—	—	—	—	6
Flying switch,	.	.	.	.	.	—	—	1	—	—	—	—	—	—	—	—	1
Total, . . . . .	.	.	.	.	.	54	47	56	92	136	43	52	34	44	50	47	695

*Tabular Statement of Train Accidents, etc., in the United States in each Month during the Year ending Sept. 30, 1885.*

	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	Total.
<b>ACCIDENTS WITHOUT DERAILMENT.</b>													
Caused by —													
Dynamite on track, . . . . .	1	—	—	—	—	—	—	—	—	1	—	—	1
Boiler explosion, . . . . .	1	—	1	1	2	—	1	1	1	1	—	—	9
Car burned while running, . . . . .	1	1	1	—	1	1	1	1	1	—	—	—	8
Broken parallel-rod, . . . . .	—	2	1	—	10	4	—	—	—	1	2	2	25
Broken axle or truck, . . . . .	—	1	1	1	1	—	—	—	—	1	—	—	4
Broken wheel or tire, . . . . .	—	1	—	1	4	1	—	1	1	—	—	—	8
Broken eccentric strap, . . . . .	—	—	—	—	—	—	—	—	1	—	2	—	3
Flues collapsed, . . . . .	—	—	—	1	1	—	—	—	—	—	—	—	2
Overhead bridge, . . . . .	—	—	—	—	—	1	—	—	—	—	—	—	1
Loose door on freight car, . . . . .	1	—	—	—	—	—	—	—	—	1	—	—	2
Falling rock in cut, . . . . .	—	—	—	—	—	—	1	—	—	—	—	—	1
Explosion of oil tank, . . . . .	—	—	—	—	—	—	—	—	—	—	—	1	1
Explosion of acid in freight car, . . . . .	—	—	—	—	—	—	—	—	—	—	—	1	1
<b>—</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>19</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>66</b>
Total number of train accidents in each month in 1884-85, . . . . .	105	96	105	145	216	86	81	62	75	76	92	91	1,230
Total number of train accidents in each month in 1883-84, . . . . .	174	122	112	147	110	115	88	76	71	89	89	100	1,293
Total number of train accidents in each month in 1882-83, . . . . .	136	125	148	168	184	142	106	120	91	119	145	158	1,641

Total number of train accidents in each month in 1881-82, . . . . .	131	133	113	137	88	99	81	94	72	92	139	153	1,332
Total number of train accidents in each month in 1880-81, . . . . .	120	145	135	223	149	113	63	85	73	12	129	144	1,381
Total number of train accidents in each month in 1879-80, . . . . .	104	86	69	62	65	65	71	46	56	78	112	124	958
Total number of train accidents in each month in 1878-79, . . . . .	61	68	63	113	88	61	50	37	64	81	79	78	843
Total number of train accidents in each month in 1877-78, . . . . .	82	83	66	75	67	49	46	50	56	54	75	76	777
Total number of train accidents in each month in 1876-77, . . . . .	103	96	88	147	56	58	69	46	49	53	98	84	947
Total number of train accidents in each month in 1875-76, . . . . .	88	87	84	60	91	109	56	64	52	79	78	106	954
Total number of train accidents in each month from Sept. 30, 1875, to Sept. 30, 1885, . . . . .	1,104	1,041	983	1,277	1,114	897	711	680	659	823	1,035	1,114	11,438
Derailment of passenger trains 1884-85, . . . . .	15	18	20	41	60	17	10	12	18	10	15	18	254
Derailment of freight trains, . . . . .	39	29	36	51	76	26	42	22	26	30	35	29	441
Total, . . . . .	54	47	56	92	136	43	52	34	44	40	50	47	695
Number of persons killed, . . . . .	26	24	12	14	18	5	6	4	14	13	25	12	173
Number of persons injured, . . . . .	196	84	65	153	202	27	58	50	74	41	75	68	993
Collision between passenger trains, . . . . .	3	3	11	6	10	3	5	1	4	4	3	2	55
Collision between passenger and freight trains, . . . . .	19	9	10	8	16	6	4	5	7	9	11	7	111
Collision between freight trains, . . . . .	26	33	25	33	35	27	16	19	16	18	24	31	303
Number of persons killed, . . . . .	11	23	11	10	23	10	8	4	10	14	12	12	148
Number of persons injured, . . . . .	74	46	43	25	57	54	15	12	39	34	96	28	523

Tabular Statement of Train Accidents, etc., during the Year ending Sept. 30, 1885. — Concluded.

	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	Total.
Accidents without derailment, . . .	3	4	3	6	19	7	4	3	4	5	4	4	66
to passenger trains, . . .	1	3	1	4	18	6	3	1	2	3	3	2	47
to freight trains, . . .	2	1	2	2	1	1	1	2	2	2	1	2	19
Number of persons killed, . . .	2	—	1	—	3	2	—	—	—	1	—	1	10
Number of persons injured, . . .	—	—	1	4	—	3	2	3	2	—	1	2	18
Total number of accidents each month, . .	105	96	105	145	216	86	81	62	75	76	92	91	1,230
Total number of persons killed in each month, . . . . .	39	47	24	24	44	17	14	8	24	28	37	25	331
Total number of persons injured in each month, . . . . .	170	130	109	182	259	84	73	65	115	75	172	98	1,534
Number of accidents causing death to persons in each month, . . . . .	23	26	19	17	25	12	12	7	14	16	23	17	211
Number of accidents causing injury, but not death, . . . . .	28	12	32	40	37	25	17	12	18	14	24	23	282
Number of accidents causing no injury to persons, . . . . .	54	58	54	88	154	47	52	43	43	46	45	51	735
Percentage of all without injury to persons, . . . . .	51.5	60.0	51.5	61.0	71.0	56.0	64.0	69.0	57.0	60.5	49.0	56.0	59.7

Average number of accidents per day in each month in 1884-85, . . . . .	3.39	3.20	3.39	4.68	7.71	2.77	2.70	2.00	2.50	2.45	2.97	3.03	-
Average number of persons killed per day in each month, . . . . .	1.26	1.57	0.77	0.77	1.57	0.55	0.47	0.23	0.80	0.90	1.19	0.83	-
Average number of persons injured per day in each month, . . . . .	5.49	4.33	3.52	5.87	9.25	2.71	2.50	2.10	3.83	2.42	5.55	3.27	-
Average number of casualties to persons per accident per month:													
Number of persons killed per accident, . . . . .	0.371	0.490	0.219	0.166	0.204	0.198	0.173	0.139	0.320	0.368	0.402	0.275	-
Number of persons injured per accident, . . . . .	1.609	1.354	1.038	1.255	1.199	0.977	0.926	1.048	1.533	0.987	0	1.077	-
Number of accidents in each month caused by defect of road or equipment, . . . . .	18	28	30	62	100	40	27	19	26	26	25	35	436
Number of accidents caused by negligence in operating, . . . . .	53	42	38	45	54	29	29	23	28	32	38	34	445



*Tabular Statement of Train Accidents in the United States during Ten Years.*

	1875-76.	1876-77	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	Total.
Total number of train accidents, . . . . .	954	947	779	843	937	1,480	1,332	1,640	1,293	1,230	11,455
Total number of persons killed, . . . . .	219	313	200	182	227	435	385	475	388	331	3,155
Total number of persons injured, . . . . .	939	1,230	689	751	946	1,691	1,467	1,798	1,913	1,534	12,958
Total number of accidents causing death to persons, . . . . .	154	132	106	100	121	225	224	258	228	211	1,762
Total number of accidents causing injury, but not death, . . . . .	221	217	143	165	197	320	284	387	327	282	2,543
Total number causing no injury to persons, . . . . .	608	598	530	578	622	935	824	1,004	738	735	7,172
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Collisions, rear, . . . . .	146	177	138	172	239	363	388	403	316	313	2,675
Collisions, head, . . . . .	93	98	79	79	111	161	140	191	146	125	1,223
Collisions, crossing, . . . . .	13	18	7	12	17	30	26	38	27	31	219
Collisions, passing, . . . . .	-	-	-	-	-	-	-	1	1	-	2
Collisions, unexplained, . . . . .	11	4	1	1	-	-	2	-	-	-	19
Deraillments, . . . . .	642	600	520	532	532	855	740	921	736	695	6,773
Other accidents, . . . . .	49	50	34	47	38	71	36	86	67	66	544
Total accidents, . . . . .	954	947	779	843	937	1,480	1,332	1,640	1,293	1,230	11,455

[C.]

## SPECIAL REPORTS ON ACCIDENTS.

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COLLISION AT CHEAPSIDE CROSSING, EAST OF GREENFIELD, MARCH 30, 1885.

Fitchburg freight train 29 coming east reached the crossing at 9.23 P.M., stopped in accordance with law, and then went on, the signal (two red lanterns at masthead) giving it the right of way. The Connecticut River Railroad passenger train going north made its stop, and then went on in spite of the signal which forebade its doing so. Its engine struck the engine of the freight train, fortunately doing little damage. The Connecticut River engineer admits that he and he alone is blamable, and gives as a reason that his attention was distracted so that he did not look for the signal. He has held his place with credit for 13 years, and has never met with an accident before. This emphasizes the danger of such crossings, and reminds railroad managers that the best of men are liable to err. Even a system of interlocking switches and signals cannot insure attention to a signal. This crossing is peculiarly dangerous; so much so that in 1879 a special act was procured by the two companies, aided by the Board, authorizing a separation of grades. And in 1881, after a general act applying to all such cases had been passed, the Board addressed the following letter to the two corporations:—

The Board of Railroad Commissioners would suggest that the recent destruction of the railroad bridge over Deerfield River, making it necessary to rebuild, affords an opportunity to do away with a dangerous grade crossing near the river. Our attention has been called to the subject by citizens of Greenfield, but it had already been discussed by the members of the Board. We would recommend that the two corporations, acting under chapter 120 of the Acts of 1881, shall separate the grades of their roads at the point of intersection in Deerfield, thus promoting the safety of travellers on both roads.

The suggestion was renewed at the hearing on April 4, and the Board hopes that the joint examination of the premises which is to be made by the representatives of both companies, will result in the removal of the danger. We take pleasure in calling attention to the conduct of Edward L. Bemis, the Fitchburg engineer, who, after falling between the tender and engine, got on again and stopped the engine. His courage and presence of mind deserve high praise.

For the Board,

THOMAS RUSSELL, *Chairman.*

APRIL 9, 1885.

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### COLLISION ON THE OLD COLONY RAILROAD AT SOMERSET JUNCTION, MAY 27, 1885.

This accident was investigated on May 29, and the place was visited on the next day, not because its results were serious, but because a head collision between two passenger trains demands examination without regards to its results.

Train 91 from Boston to Newport is due at Somerset Junction at 5.20 P.M. Train 152 from Fall River to Middleborough is due at 5.18. A positive signal is required before either can pass. One ball hoisted on the mast admits the downward train (91); two balls admit the upward (152).

If no ball is hoisted both come to a stand. The trains are each visible to the signal man at the distance of a mile. He sets the switch as well as the signal. On this occasion No. 152 was two minutes late, and No. 91 arriving first, properly received the signal to come on and obeyed it; and the switch was set for that train. The engineer of No. 152 neglected to observe the signal until he found that the switch was set for the other train, when he used all possible means to stop, but in vain. Every means was taken to check No. 91 also, but a collision could not be prevented. Fortunately no one was killed and no passenger was injured. Three of the train hands who were somewhat bruised and cut are all doing well. The damage to the cars and engines amounts to \$4,000.

No one is in any way censurable except the engineer of No. 152, whose unaccountable neglect to observe the signal is the sole cause of the accident. He has been in the service of the road for 30 years; has never had any trouble before, and is remarkable for his fidelity and good conduct. Indeed, the general manager states that if he had

been called upon to name the first among his engineers he should have named this man. Probably his attention was distracted by the fact that his engine was not the one he had used heretofore. After he discovered his error he did all that could be done, and he remained on his engine after the collision. The managers of the road have long been engaged in a general plan of double tracking, which includes this spot, and which will soon be completed.

For the Board,

THOMAS RUSSELL, *Chairman.*

JUNE 1, 1885.

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### COLLISION ON THE OLD COLONY RAILROAD AT SOUTH BOSTON, JUNE 8, 1885.

This accident was investigated on the day of its occurrence. During the repairs outward and inward trains were necessarily run on a single track for a short distance. Every possible precaution was taken to prevent accidents, and full notice in print was given in advance as to the signals, speed and other regulations. But the engineer of train No. 12, who received the notice and receipted for it on Friday, June 5, forgot to read it until after the collision on the 8th, running in spite of the order and of the red target which forbade him to enter the track. His train collided with outward train No. 9, damaging engines and cars to the amount of about \$3,000, but fortunately inflicting no serious injury either upon passengers or train hands. No blame attaches to any one except the engineer, who admits that the collision would have been impossible if he had read the notice which he received. His neglect is the more unaccountable because of his high standing and his long and faithful service.

For the Board,

THOMAS RUSSELL, *Chairman.*

JUNE 9, 1885.

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### COLLISION ON THE FITCHBURG RAILROAD, AT CON- CORD, JUNE 6, 1885.

A rear collision on the Fitchburg Railroad occurred June 6 at Concord. Two cars, as part of passenger train 109 from Boston to Fitchburg, had taken a special party to Lincoln. These two rear cars

were to be detached and held at Concord till the arrival of a down train.

The depot master at Boston had ordered the conductor to draw these cars to the station at Concord, where the station agent would tell him what to do with them.

At Lincoln, on the way to Concord, a telegram was received from the Concord station master, directing that the two cars should be cut off "on the grade,"—a space of a mile with a down grade of 34 feet,—so that they might be switched across to the down track. This order the conductor obeyed. But the brakeman in charge failed to properly check the speed of his two cars, so that the switchman had not time to throw the switches after the main train had run by, and before the two detached cars came on.

The result was that these cars struck the rear of the train while it was discharging its passengers at Concord, injuring several of them somewhat by the shock and by bruises.

1. Rule 64 is as follows: "Cars must not be switched when they can be set on side tracks with engine." This rule is only a re-enactment of one of the first laws of safe railroad practice. A "flying switch" of a passenger train or any part of a passenger train, should not be made. This rule the station agent at Concord disregarded. To switch these cars would save a little trouble. But there was nothing to justify the violation of a positive rule founded on a prudent regard for the safety of passengers.

2. The conductor was justified in obeying the positive order of the station agent, who not only had general authority to direct him in Concord yard, but whom he was particularly ordered to obey in his disposition of these cars. Literally, he was directed to go to Concord and follow the order of the agent as to these cars. He followed the spirit of these directions when he obeyed the order of the agent in advance of his arrival at Concord. To have disregarded it would have been a dangerous act of insubordination.

When the station agent's order was communicated to him by telegram, he had reason to suppose that some special circumstances called for an exception to the general rule. At all events, his duty was to obey his immediate superior; and at this time and place, and for this matter, the station agent was his immediate superior. When a new rule shall forbid obedience in such a case, and shall absolutely prohibit the switching of cars in like circumstances, the duty of a conductor will be different.

3. The brakeman did not appreciate the amount of grade, and failed to do his utmost in checking the speed of the cars in his charge.

4. The switchman was at his post, and did his whole duty promptly.

5. The accident, although fortunately not serious in its results,



shows the importance of not only enacting, but of enforcing regulations against "running switches," and of making it understood that the necessity which justifies them is a real one and not a mere convenience. And such, as we have reason to know, has been the rule of the Fitchburg managers for years.

For the Board,

THOMAS RUSSELL, *Chairman.*

JUNE 9, 1885.

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### COLLISION AT LEOMINSTER ON NORTHERN DIVISION OF OLD COLONY RAILROAD.

A passenger train, 504, running westward, by reason of a misplaced switch ran on to a side track leading to a gravel pit and occupied by a train of empty gravel cars. The engineer remained at his post, and received no serious injury. The fireman, Mr. Emerson, in jumping from the engine was caught under the tender, and received injuries which caused his death. None of the passengers were seriously injured. The damage to the engine and cars amounted to \$2,000.

The switch had been set for the main line, and had been used for the passage of a gravel train to the main line, and thence to a side track, where it stood awaiting the passage of train 504. After so setting the switch, the boy who did this under direction of the conductor, received orders from him, and went to his work in another direction. That he set the switch rightly for the main track was proved by the passage of the gravel train over it. That he left it in position for the main track was shown, not only by his own testimony, but by that of three other witnesses, who saw the target after the boy left it. All testify that it was right. The switch with the target remained in perfect order, and it was used for the passage of a train shortly after the accident.

This is abundant proof that the switch was as it should have been shortly before the coming of 504. Some one must have thrown it for the side track just before that train arrived. In the absence of any proof of malice, it is the theory of the railroad managers that some one acting under a mistake, and having "lost his head," must have thrown the switch for the side track, and that this unknown person naturally concealed the fact in view of the consequences. Whether this is true, or whether it was done from bad motives, cannot be known. But it is certain that the switch was rightly set, and that it was thrown wrong by some one unknown, just before the coming of the train.

As soon as the target was in sight, it was seen to be wrong, and Mr. Murphy, the engineer in charge, did all in his power to avert a collision. All damage would have been prevented but for the presence of the empty cars on the side track.

For the Board,

THOMAS RUSSELL, *Chairman.*

Nov. 5, 1885.

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### COLLISION ON THE BOSTON & LOWELL RAILROAD, AT NORTH BILLERICA, DECEMBER 23, 1885.

On the night of December 23, a passenger express train (315) running from Boston to Lowell struck the rear of a through freight train (305) of 56 cars, demolishing the rear car, the caboose, and a box car, damaging the engine of 315 and the cars of 305 to the amount of \$3,500, and injuring the rear brakeman of 305 and an employee of a connecting road, who was in the caboose, but doing no serious injury to any of the passengers. Train 305 being late, was "running on the time" of 315, and in clear violation of the rules of the company. These rules require that freight trains should in all cases keep ten minutes off the time of regular passenger trains. Yet, when 305 left Wilmington there were only six minutes between the trains, and when 305 left East Billerica the express train 315 was only three to five minutes behind it. The collision occurred after 305 had slacked, and while the conductor was switching it off on a side track. Even then the accident would have been prevented if the rear brakeman had not failed to do his duty in flagging the rear of the train. The rules are explicit on this point, and require him to go half a mile — 18 telegraph poles — to the rear whenever the train is delayed from any cause. This rule has been enforced within two months by discharging a brakeman who neglected to comply with it. The rules also make it the duty of the conductor to protect his train by sending signals. It is his duty to see that the rear brakeman does his duty. But in this case it was impossible to do this. The train was on a curve; the rear car was not in sight from the front of the train. No signal could be given, and there was not time to send to the rear. But if the ten-minute rule had been observed, there would have been time to send, if from any cause the train had been obliged to stop.

There can be no question as to the fault in this case. 1. The engineer and the conductor were clearly guilty of acting in utter

disregard of rule. They “took the chances” of running in advance of a fast express train, and of running on the time of that train. The accident was a natural result of their disobedience, and it would have occurred sooner if the passenger train had not been late. Both have borne excellent characters, and have always been free from misadventure and from censure both on this road and elsewhere. But in this case they knowingly violated a wise regulation, and they thus imperilled the lives and limbs of many passengers.

2. No collision would have resulted from this violation of rules, if the rear brakeman had done his duty in flagging the train. He appears to have violated an important regulation. He is a sufferer from the collision. He is, like the other trainmen, of excellent reputation. He is unable to appear as a witness, and we cannot condemn him unheard.

3. No blame whatever attaches to any one connected with the passenger train 315. This collision, which might have been serious, is only one more illustration of the fact that no amount of care in the framing of rules or in the selection of men will afford full insurance against accidents. The managers had done all that could be done to prevent this casualty. It occurred because men of tried capacity and fidelity violated well-defined and well-known regulations.

By the Board,

THOMAS RUSSELL, *Chairman*.

DEC. 26, 1885.

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## FATAL ACCIDENT ON THE CENTRAL MASSACHUSETTS RAILROAD, AT OAKDALE, OCT. 26, 1885.

This collision caused the death of one man, and the loss of limbs or the fracture of bones of eight others. It occurred in this way: Three flat cars and a caboose, pushed by an engine, were on their way toward the place of work, six miles distant from Oakdale. About 80 laborers, nearly all Italians, were on the train. None were in the caboose. The men were some standing, some lying down, and some sitting on the side with their feet hanging over it. There were no seats, no sideboards and no stakes or uprights of any kind. On Saturday night, October 24, four cars had been left above the highway crossing on a side track, which joins the main track just beyond Oakdale, and one car had been left below the crossing. This car projected so far over the track that it swept the men from the side of the first flat car, with the sad result stated above. The car could not

be seen by the engineer. When it was seen by the "lookout," the train was stopped as soon as it could be, but it was too late. The wounded men were promptly furnished with medical aid, and everything was done for their relief that humanity could suggest. No question of legal liability ever comes before this Board, and the law as held in this State regarding contributory negligence and employees' rights seems to dispose of any question that could arise before any tribunal. But there are lessons as to the moral responsibilities of railroad operators that are forcibly illustrated by this occurrence.

The testimony shows clearly that the car left on Saturday night was in such a position that it could be and was passed safely, not only by cars, but by flat cars with men seated on the sides. Its wheels were "trigged," but some person had probably removed the "chocks," and replaced one of them when he saw that the car was moving down the steep grade. It moved half its length only, but this was enough to produce fatal results. If the railroad at this point were used for traffic, it would have been gross carelessness to leave a car with no better security, so that any mischievous tramp or meddlesome boy could set it in motion, with the chance of a serious fatality. As this portion of the track was used for construction trains only, the hands probably acted with the care usual in such cases. But it should be always remembered, that when the slightest possibility of an accident exists, it will at some time occur, and that its results cannot be calculated in advance. The slightest negligence may lead to the saddest results. Such a case as this might not happen until the thing had been done ten thousand times. It is to guard against this ten-thousandth chance that extreme diligence and foresight are required.

The workmen who habitually rode to their work on the flat cars provided for that purpose among other uses, were accustomed to ride with their feet hanging over the sides, — a most dangerous position. They had been often been warned against doing so by words, which they might fail to understand; and by actions, which they could not fail to understand. They seem to have resented this interference, and, after being removed, they would obstinately return to their position. After remonstrance had been tried and found vain, they were permitted to ride in this way. On the morning of the accident this was permitted without warning or objection. Assuming that there is no legal responsibility, there is a moral responsibility in dealing with Italian peasants, ignorant of the language and of the perils of railroad travelling. In the case of persons of tender years, the law places a legal responsibility upon carriers and others, requiring of children only such care as corresponds with their age. Humanity requires extra care of persons supervising ignorant inferiors. Such persons should



not be made the victims of their own ignorance and stupidity, or even of their own wilfulness. These ignorant men were allowed to ride in a way which their overseers knew and declared to be perilous. This does not make the corporation liable for damages. But it should not have been done, and should not be repeated on this or any road.

Especial care should have been taken, because the train was run by pushing, — a dangerous method, and one which we have had occasion to condemn in a more serious case than this. The reason given for pushing was, that owing to the unfinished state of the road and the want of facilities, the engine could not be shifted at the other terminus, and it was better to push up than to push down. This justifies the engineer, but it was a cause for increased vigilance on the part of those who supervised the loading of the cars with their living freight.

The reason why the laborers rode as they did, was the fact that it is difficult and painful to ride without seats, and awkward as well as somewhat dangerous to ride standing. For this reason, as well as for a shelter from the weather, it is the approved practice on most of our railroads to place on such trains a "service car," generally an old passenger car, in which the men can ride with more comfort and safety. And we recommend this practice, where there is any considerable amount of construction to be done.

Finally, we would repeat what we have said before: "Railroad operators sometimes forget the force of the agencies with which they deal. That which would be a trifling error, under other circumstances, becomes guilty negligence when steam is the power employed. \* \* \* When failure occurs, the consequences seem altogether out of proportion to the amount of negligence. \* \* \* The censure applied to what are called slight delinquencies sometimes appears harsh. But in treating of the practical operation of a railroad, no act of negligence can be called slight. And if the criticism of the Board seems severe, it is emphasized by the death and suffering of the victims more than by the language of the report."

The law of this State refuses a right of action where the sufferers have contributed to their own injury, and where one employee is injured by the fault of his fellows. But the higher law of humanity demands the utmost care in protecting the lives and limbs of workmen, without regard to legal liability. And the Board is sure that the managers of this and of all railroad companies will thank them for urging such constant care upon all their subordinates, especially when dealing with ignorant and helpless strangers.

By the Board,

THOMAS RUSSELL, *Chairman.*



## DEATH OF JOSEPH H. CHARLTON.

The death of Joseph H. Charlton, at the Allston repair yard of the Boston & Albany Railroad Company, occurred on January 15. Investigation has been delayed on account of the condition of Albert McLean, a youth 19 years old, who was injured at the same time and who is still in the hospital.

The two were at work on a gravel car standing upon a repair track near to track No. 6, on which engines and cars pass and repass. The point selected by the foreman for the repair of this car was where the two tracks converge. There are five such points in the yard. In the course of this work it became necessary to tip the car toward track 6, and thus to obstruct it. An engine passing over track 6 struck the gravel car, killed Mr. Charlton and wounded his companion. The repair track was flagged properly by order of the foreman whose duty it was to protect the workmen in this way. Track 6 was not flagged, and never had been.

1. It does not appear whether or not the car remained in its dangerous position any longer than was absolutely necessary for the purpose of driving the bolts.

2. There seems to have been no reason why this dangerous point was selected by the foreman for the repair of these cars. It was apparently inadvertence.

3. Not only was track 6 not flagged at this time, but it was testified that it never had been flagged; and the foreman stated that no rule or usage required the flagging of that track when it was obstructed by the repair of cars on a neighboring track. It never had occurred to him, nor, as it would seem, to any one, that such a rule or practice was necessary. Yet, whenever a point between converging tracks is selected as a place for repairs, this danger is always possible. Such an accident probably will never happen again in this yard. It ought never to have happened. A death ought not to be needed to enforce a precaution required by common prudence. The law, as construed in Massachusetts, gives great immunity to employers in regard to injuries suffered by workmen from the negligence of their superiors in position; but none the less should all managers of railroads be careful in protecting the lives of those whom they employ.

By the Board,

THOMAS RUSSELL, *Chairman.*

## DEATH OF AMBROSE PERKINS.

The fatal accident to Ambrose Perkins, at the crossing of the Boston & Albany Railroad over Hoosac Street, in Adams, was investigated July 9, on the spot, by the Board, and many witnesses were heard. It appeared that Mr. Perkins had driven his wagon, with his son-in-law and a child, to a mill closely adjoining the railroad. The view of the track northward was obstructed by some freight cars. The view southward was unobstructed. While Mr. Perkins was making a purchase at the mill, he heard the whistle of an approaching train, and fearing that his horses would be frightened, he started in great haste to drive across. The evidence tends to show that Mr. Perkins was deaf in one ear, and that the whistle, which was toward the north, seemed to him to come from the south. Looking southward he could see a clear track, and he therefore attempted to drive across the railroad. It would have been prudent to have held the horses where they were, or to have driven them away from the crossing until the train had passed; but the risk of crossing was taken, with a fatal result.

The selectmen, acting on a vote of the town at the March meeting, had sent to the Boston & Albany Railroad Company a written request for flagmen at this and two other crossings. No answer was received. The selectmen did not follow up their request by petitions to the county commissioners and to this Board, but renewed the request, as it happened, on the very day of the accident. Since that time, flagmen have been placed by the company at this and at the other two crossings indicated.

This casualty only repeats the warning against venturing, under any circumstances, on a highway crossing in face of an advancing train. All possible warning of the approach of the train was given, and every possible effort was made to stop it after the danger was known. As a flagman has already been placed on the spot, no recommendation upon that point is needed as to this place, unless the selectmen should prefer a gate. But it seems to be a proper time to advise this company, and all the railroad companies in the State, to examine the various unguarded crossings over their tracks, so that the needed precautions for the safety of travellers may be taken before, rather than after, the occurrence of any fatal accident.

For the Board,

THOMAS RUSSELL, *Chairman.*

JULY 11, 1885.

[D.]

## PETITIONS FOR GRADE CROSSINGS.

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ROAD COMMISSIONERS OF FRAMINGHAM, PETITIONERS  
FOR A GRADE CROSSING OVER THE MILFORD  
BRANCH OF THE BOSTON & ALBANY RAILROAD AT  
SOUTH FRAMINGHAM.

The company objects to granting the petition, on the ground that Claflin Street has not been legally laid out. (1.) Because the laying out does not follow the petition for a street, not extending as far as the second terminus named. (2.) Because, instead of laying out a street from terminus to terminus, one way was laid out to the eastern side of the railroad, and the other from the western side of the railroad toward the second terminus proposed, with a gap between the two detached portions of way.

1. It has always been held in this State that, on petition for a highway from one point to another, a portion of such highway may be laid out. The same rule would apply to a townway laid out by road commissioners. The supposed need of following the petition strictly would seem not to arise from the fact that in such case there is no need of a petition at all. Due notice appears to have been given to all the parties whose land was taken, and it was vitiated by the fact that some were notified whose land was not finally taken.

2. No authority is quoted to show that two portions of a way may not be laid out with an intervening space, over which it is proposed to extend the way when leave is obtained so to do. We do not like this method of location, but if it is not illegal, the Board has no right to say that it shall not be pursued.

3. If there were any irregularity in the action of the town authorities, the proper course would seem to be a direct proceeding by application to the Supreme Court for *certiorari*.

4. The law does not require that there shall be any laying out before the consent of this Board is given for a grade crossing. The way cannot be laid out across the railroad until the county commissioners have authorized it, nor at grade until this Board has consented and the county commissioners have given special authority. When a purpose has been shown to locate a townway across railroad tracks, and the county commissioners have adjudicated in its favor, and have found that public necessity requires it to be at a level with the track, the case is ready for action by this Board, to be followed by appropriate action by the town authorities.

There is therefore no valid objection to the jurisdiction of this Board. And for reasons presented at a former hearing, consent is given.

By the Board,

THOMAS RUSSELL, *Chairman.*

FEB. 5, 1885.

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### CITY OF HOLYOKE, PETITIONER FOR A GRADE CROSSING OF THE HOLYOKE & WESTFIELD RAILROAD.

The city of Holyoke asks consent of the Board for laying out Sargeant Street over the Holyoke & Westfield Railroad at grade. A way connecting with a bridge over the canal has for years crossed the railroad; many buildings have been erected upon it, and it has been freely used until a late period, when the railroad managers removed the planking and thus obstructed travel. This way hitherto has never been legally laid out as a street.

The city petitioned the county commissioners, April 14, for an adjudication that public necessity required a crossing at grade. At that time a crossing under the railroad was impossible, because of the canal level. The hearing was had May 22, and was continued to June 5. In the meantime the railroad company raised the track of their road, but not enough to make an underneath crossing practicable. The county commissioners adjudicated in favor of the level crossing. After the city's petition for the consent of this Board, the railroad company completed the raising of their track so that an underneath crossing is now feasible.

Two points are undisputed. It is agreed that a crossing is necessary. The railroad company admits this. It is also agreed that if a grade crossing can be avoided without inordinate expense, the petition should be refused. All the witnesses admit this proposition;



and the Board holds it independently of the testimony in this case. But it is clear that an underneath crossing is now practicable at moderate expense, and therefore it is clearly the duty of the Board to refuse a grade crossing. But the city contends that when its petition to the county commissioners was filed, it had a right to a grade crossing, because no other was feasible, and that this was a vested right which could not be taken away by any subsequent event, — least of all by any action of the railroad company. This seems to us an erroneous view. This is not an appeal from the county commissioners. It is an independent proceeding upon independent testimony, and the decision is to be upon facts as they now are, not as they once were. This is not a suit at law where the plaintiff's rights as a general rule depend strictly upon the facts existing at the date of his writ. It is not a technical question of victory for petitioners or remonstrants, but a practical question of convenience and safety for the public. Any change of circumstances affecting that question must be regarded by this Board. If, for instance, the petitioners had rightly asked and the county commissioners had rightly granted a grade crossing, and if afterward a sweeping freshet had so altered the lay of the land that a grade crossing had become unsafe, and an underneath crossing had become feasible, this Board would not be bound to stultify itself and to do what had become wrong, because it had once been right. So in this case, a safe crossing has become possible, and we can allow no other.

It is said that the action of the railroad managers in raising their track was in bad faith, and that they should not gain anything by it. But the chief question is not as to the company, but as to the safety of the travelling public. Whatever the motive, the necessity for a dangerous crossing is removed. And we see no bad faith on the part of the company. When the grade crossing was pressed on the ground of necessity, the railroad managers offered a promise to remove that necessity by raising their tracks. It was said that they had no authority to make such a promise; that it was doubtful whether the corporation could make a binding promise, and it was certain that no tribunal (except the legislature) could order the raising of the track. The only effectual way to assure this change was to make it, and it was made. This is not bad faith. It is the only possible demonstration of good faith.

It seems to us, therefore, that the city acted wisely in asking for a grade crossing when no other was possible; that the county commissioners did rightly in granting that petition, but that under the change of circumstances we are bound to refuse it. The city has gained what perhaps it could have gained in no other way. It has secured the elevation of the track. The company has spent something, and must



spend more, for its own security in maintaining its embankments. In addition to this, the city has gained a promise from the company to construct the bridge, if it is desired, for a moderate sum. This can be done most advantageously by the company, and thus a needed improvement can be effected in a safe way and on fair terms.

It is not necessary to discuss the question whether this Board would ever be justified in creating a grade crossing with the design of afterward separating grades on terms equitable to all parties, nor to decide in what case such action would be proper. It is enough that this is not such a case. And the Board declines to grant the petition.

For the Board,

THOMAS RUSSELL, *Chairman.*

JUNE 29, 1885.

NOTE.—Other petitions for grade crossings were considered by the Board, and consent given or withheld without any accompanying report.

[E.]

PASSENGER, FREIGHT AND EXPRESS  
FACILITIES.MAYOR AND ALDERMEN OF CAMBRIDGE *v.* FITCHBURG  
RAILROAD COMPANY.

The mayor and aldermen of Cambridge ask for better facilities at the freight depot on the Fitchburg Railroad in Cambridge. It appeared that a building, which was erected as a depot and to which a street had been laid out by the city, had been leased to a grain firm, and that the freight agent was employed in their business by the firm and partly paid by them. It is not necessary to state any details of testimony, as the natural result of such an arrangement would be preference of the agent's employers, and lack of accommodation for others.

Mr. Phillips, the President, recognized the impropriety of this arrangement, and before the hearing took measures to terminate the lease. When this is done, one-half of the building, which is large enough for such a division, will be used as a freight depot and placed in charge of an independent agent. Mr. Phillips would have done this at any time, if the facts had been made known to him. This disposes of the real grievance.

It was said that difficulty had been experienced in sending merchandise to Cambridge, because it was not known upon other railroads as a billing station. It is now declared to be a billing station from all points, and a station where freight will be received for all points. And notice to this effect will be given to all stations upon connecting roads.

By the Board,

THOMAS RUSSELL, *Chairman.*

APRIL 20, 1885.

SELECTMEN OF CHELMSFORD *v.* BOSTON & LOWELL  
RAILROAD COMPANY.

The complaint is that the company proposes to remove a side track from a stone yard in North Chelmsford, and to discontinue its use as a freight depot, substituting therefor a new yard already existing in Tyngsborough, half a mile to the north. The Chelmsford yard has been used for more than 40 years, being situated between the railroad and the river, at an old landing from which granite was formerly shipped to Lowell. An ancient way crosses the railroad from the highway to the yard. One firm has transacted business here to the amount of \$24,000 in a year, sometimes furnishing employment on the spot and at the quarries to 60 men during the working season. This business, it was said, would be seriously affected by the proposed change, while the owners of neighboring quarries would be greatly injured by being compelled to cart their stone half a mile further, at a loss of \$2 each day for a two-horse team. Workmen also who now board in North Chelmsford would be put to inconvenience by the proposed change. The motive of the railroad company is to avoid the danger of the grade crossing by which these premises are reached, — danger which is made greater by the heavy nature of the loads carried. Two accidents have occurred within a few years, one causing the death of a man. Both were said to have been the result of negligence, in which they resemble most grade crossing accidents.

No law forbids the discontinuance of freight depots or of side tracks connected with them. The statute (sect. 156, chap. 112) refers only to passenger stations. But the spirit of the law might well call for recommendation from this Board, where business had been set up and investments had been made upon the faith that an established freight depot would be continued, and where it was proposed unreasonably and inequitably to abandon it. Indeed, if the reasonable accommodation of the public demanded a new freight depot, the Board would feel bound to recommend it. But, in this case, the company have good reason for the change which they propose. Their sole object is security to their passengers and to the public. For this end they have incurred some expense, and are ready to incur more, so that the crossing of their tracks by stone teams may be obviated. And they offer free of cost land for the erection of derricks and for the handling of stone at a spot lying between the highway and their tracks. In this they are performing

a duty. And while we regret the inconvenience and loss to individuals from this improvement, we feel bound to commend action of which the sole cause and the general result is the public good.

By the Board,

THOMAS RUSSELL, *Chairman*.

MAY 15, 1885.

### E. F. ROLLINS AND OTHERS *v.* BOSTON, WINTHROP & SHORE RAILROAD COMPANY.

The petitioners complain that a plank walk leading from Shirley Street to a station, and used for more than four years, has been discontinued, and ask a recommendation for its restoration. The case grows out of the location of two railroads (now consolidated) which ought never to have been constructed as they are, and which never would have been so constructed if the law had given to this Board its present powers.

Ocean Spray station, on the narrow-gauge track, is 410 feet from Shirley Street, where many who use it live. The broad-gauge track is 266 feet from Shirley Street, and 144 feet from Ocean Spray station. The plank walk in question was laid by the narrow-gauge road from the station to Shirley Street, after the broad-gauge road was located, but before it was constructed. This walk is laid across a marsh, and affords a direct and convenient passage to many customers of the railroad company.

In June last, Dr. Ingalls, a prominent citizen of Winthrop, while hurrying recklessly across this walk on his way to the station, was killed by a construction train on the broad-gauge track. This sad accident was the result of his own gross negligence. But it is referred to by the railroad managers as a reason for removing the walk.

They have taken it up and laid a walk which leads by a circuitous route to Ocean Spray station. All persons using it are obliged to cross the broad-gauge track at a level crossing over the street, which is guarded by a flagman. The time required for walking from the point of intersection of the old plank walk with Shirley Street to the station was one minute. The time required to walk over the new route is four minutes. Thus the extreme inconvenience is a walk of three minutes.

The Board would not hesitate, in a proper case, to recommend the renewal of a walk affording convenient access to a station, although not on the land of the road, when, as in this case, leave to place the

walk could easily be obtained. And this would be especially proper when parties had been induced to build or to hire dwelling-houses in proximity to a station, by the expectation that the accommodation would be permanent. But we cannot recommend the construction of a dangerous and apparently illegal grade crossing over a railroad track. There is especial danger at this point, because trains are run, and the scheme of operation is that they shall always be run, at nearly the same time on the two tracks, so that passengers seeking or leaving the station on the narrow-gauge will run the risk of being struck by the fast trains on the broad-gauge. It is true that danger is still incurred by crossing the broad-gauge at the street. But, not to dwell upon the fact that two crossings are more dangerous than one, the more important fact is that this crossing is guarded by a flagman. And, still more, this grade crossing is a legal one, while this crossing which we are asked to recommend would be one established without authority of law. And our recommendation would not justify the managers in constructing the way requested.

The only legal method of proceeding, if there is any legal method, would be for the selectmen to lay out a footway, applying first to the county commissioners and then to this Board for permission to cross the broad-gauge road at a level.

Regretting the inconvenience to which residents at Ocean Spray are subjected, we have no power to act further upon the petition. A question arose at the hearing as to the safety of Great Head bridge. It was at once inspected by the Board, and by a practical expert, who certifies that the bridge is perfectly safe.

By the Board,

THOMAS RUSSELL, *Chairman.*

JUNE 19, 1885.

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#### WINSLOW v. BOSTON & ALBANY RAILROAD COMPANY.

The petitioner, an expressman conducting an express-freight business between Boston and Westborough, complains of unreasonable rates and of an undue preference. Believing that privileges not granted to him were given to other expressmen running to other places, viz., to Natick and Wellesley, he applied to the freight agent. Not receiving the desired information, he appealed, as was his right, to the Board.

It appears that lower terms are given to the Natick express; but the two are not rivals, and the petitioner is not injured by the low



rates. The testimony as to those rates is admissible on the question of reasonable terms, but it fails to show rates so excessive as to call for any action by the Board.

The respondents complained that they were called to answer to a complaint which was not proved to the satisfaction of the Commissioners. But this complaint seemed to be founded upon the erroneous idea that the Commissioners will never hear a case unless they have fully decided in favor of the petitioners, in advance of a hearing. Such is not the practice of the Board. It is not unlikely that the hearing might have been avoided if fuller information had been given to the applicant by the representatives of the company.

For the Board,

THOMAS RUSSELL, *Chairman.*

JULY 31, 1885.

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#### McBRIDE AND CARNEY v. FITCHBURG RAILROAD COMPANY.

The petitioners ask a recommendation to the Fitchburg Railroad Company, to allow them to act as expressmen on their road, between Boston and Waltham. The managers agree to do so, but require a guaranty of business amounting to \$75.00 per week. There are three expresses now on this route. One has always been required to give a like guaranty. The other two, each doing a business exceeding \$75.00, have not hitherto been required to guarantee any amount, but they are now required to guarantee the same sum.

The Board has held that a railroad company accepting one express must admit other responsible parties on reasonable terms. The only question is, whether the terms here demanded are reasonable. The petitioner would not deny that some requirement as to the amount of business is reasonable. Otherwise an indefinite number of applicants must be received if they apply, to the annoyance of travel and traffic. Every man who wishes to try his hand at this kind of business cannot, as of right, do so, without complying with reasonable requirements, including a fixed minimum of payment, or what is the same thing in effect, a fixed minimum of business to be secured. We cannot say that the requirement in this case is unreasonable, and no recommendation is made.

For the Board,

THOMAS RUSSELL, *Chairman.*

JULY 31, 1885.

SELECTMEN OF EVERETT *v.* MIDDLESEX RAILROAD COMPANY.

The petitioners ask that three cars be run through Everett Square every hour during the business hours of the day, and that a late car be run, leaving Boston at or after 11 P. M., for the convenience of persons attending lectures and places of amusement. They relied on the result of a former hearing, when they asked for three cars each hour, and were told by the Middlesex Railroad Company that the only objection was the want of a turnout which would render such accommodation possible. The Board assented to this view of the case, and advised that three cars be run when the needed facilities should be supplied. The turnout was granted, and, for a time, the cars were run.

A change in the mode of running cars now presents a somewhat different question. And the president of the company claims that the business does not demand or warrant the number of cars requested.

There is no doubt as to the principle on which the decision of this application depends. The company is bound to furnish reasonable accommodation to the travelling public; and the accommodation due depends mainly on the amount of travel which the place will furnish. As the parties differ on this point, we are glad to accept the proposition of the president of the company that the desired number of cars shall be run for a time, in order to obtain the best evidence possible on this point. The time should be long enough to give a fair test (say four weeks), and the running of the cars should be thoroughly made known to the public.

A like offer was made as to the car desired to be run at a late hour. This, also, will give the best testimony as to its need. But it will be understood that such a convenience as this may, in some cases, be reasonably demanded, without proof that it will directly furnish any profit. To make this test more satisfactory, it is recommended that the time for placing this car on the route, and the hour for running it, be arranged by agreement with the selectmen.

For the Board,

THOMAS RUSSELL, *Chairman.*

SEPT. 28, 1885.

## SAMUEL BOYD AND OTHERS, PETITIONERS FOR A THROUGH CAR FROM BOSTON TO MARLBOROUGH.

The petitioners ask the Board to recommend that a through car for Marlborough may be placed on the train leaving Boston at 4.35 P. M., so as to prevent the annoyance, danger and delay incident to a change

of cars. The route from Boston is 21 miles over the Boston & Albany to South Framingham; thence 10 miles over the Old Colony. The train is now made up of three cars for Milford, four for Worcester and two for the Old Colony at South Framingham, with an additional car on Saturday for Marlborough. The managers of the Old Colony wish to have the car run as desired by the petitioners, and have repeatedly applied to the Boston & Albany for such accommodation; and they joined the people of Marlborough in the hearing before this Board. The Boston & Albany Railroad Company demurred to the jurisdiction of the Board, as follows:—

“In the matter of the petition of Samuel Boyd and others, citizens of Marlborough *v.* Old Colony Railroad Company and Boston & Albany Railroad Company, the Boston & Albany Railroad Company comes and says that the Board of Railroad Commissioners has no jurisdiction to act upon or under the petition above named, otherwise than to dismiss the same, because said petition relates to the business of connecting railroads, as to which, and the terms on which the same shall be done, and the compensation to be paid therefor, and the accommodation to be furnished by the corporation owning or operating either road to the other, the Board has jurisdiction only on petition of one such corporation, and not on the petition of individuals.”

This view of the law was further argued by the learned counsel for the Boston & Albany, who claimed that “the company owes no duty whatever to the people of Marlborough, except indirectly as it results from the statute as to connecting roads; and nothing can be done except under those statute provisions.”

This is the chief question in this case. If this view is correct, the people who are obliged to travel and to conduct their traffic over two connected roads, are cut off from any recourse to the recommendatory jurisdiction of this Board as to facilities on the main road, and if the connecting road fail to ask for such facilities, no power exists even to recommend them.

In our view, a railroad company is chartered to accommodate the public. Its franchises are granted for the consideration that they shall be employed for the good of the public; and the duty of furnishing reasonable accommodation is not limited to the points covered by the charter, but extends to other places, including certainly those which legislative power has connected with its line. There is a direct relation between the public and the managers of all the railroad lines which they wish to use for the purposes of travel or business. The people who live on a connecting road, and who are aggrieved, are not confined to a legal remedy through the company on whose road they live. They may seek directly such relief as this Board can give by

its recommendation. Otherwise, no matter how insufficient, unfit and even unsafe, the provision made by the main road might be, the people would be without redress and the Board would not be allowed to say a word, unless on formal petition on behalf of the connecting road. And the managers of this road might decline to make such application, — and so by a combination of the two companies, or by their neglect, the public would be left without any remedy. An imaginary case will test the soundness of this doctrine.

If the Old Colony Railroad Company should neglect to ask for more than one car daily on one train for Marlborough, that car would be so overcrowded that its passengers would be obliged every day to stand in the aisles and on the platforms, without regard to comfort or safety. Yet the theory of the Boston & Albany would deny to the people the right of petition for a recommendation that better and safer facilities should be granted. In our view, they have this right; their request properly includes both corporations, and the relative rights of the two companies may be the occasion for another proceeding. In other words, the rights of the public are not to be confounded with those of the connecting road; and they may be, in some cases, in conflict with the wishes of the managers of both roads.

The only other question is one of fact, whether the people of Marlborough are reasonably accommodated now, and whether the proposed addition to their facilities is reasonable, considering their needs, the business which they furnish to the line, and the cost of the proposed facilities to the railroad companies.

The strong desire of the people for a through car grows chiefly from the delay resulting from the changes now unavoidable, especially from the necessary shifting of the baggage, mail and express matter at South Framingham, or Marlborough Junction. The detention amounts to nearly 15 minutes, and is harder to bear because the train was run for a long term of years without such delay. This delay also annoys passengers to Fitchburg and other points beyond Marlborough Junction, as well those going to Marlborough; and this is one reason for considering the petition with favor. The mere change from one train to another, while it troubles men little in pleasant weather, is annoying to every one in bad weather, and is always objectionable to women, especially when they are encumbered by parcels containing their purchases in Boston.

Marlborough is a thriving town of near 12,000 inhabitants, busy in the manufacture of boots and shoes, and furnishing the two roads much traffic, both passenger and freight. The number of passengers going over the Boston & Albany to the Old Colony road is a matter of controversy, but it is admitted to exceed 500 daily. The number of seats which the Boston & Albany furnishes for the use of Old



Colony passengers exceeds 1,100, but many of these seats are occupied by Boston & Albany passengers, so that the Boston & Albany does not "haul dead wood" in the proportion indicated by these figures. The number of Old Colony tickets in the train in question is over 50, and the number of passengers going to Marlborough averages at least 17. But it was in evidence that the number of passengers using this train had been greater, being reduced by the withdrawal of the through car; and among those ceasing to use the train for that cause was the gentleman who heads the petition. There is also some reason to believe that the real figures should be larger than those given above, and that a considerable number of Old Colony passengers, including several for Marlborough, were omitted from the count of the Boston & Albany witness.

But the case of the petitioners does not depend upon their ability to prove that every seat or one-half the seats will be occupied all the way from Boston to Marlborough. It need not be said that reasonable accommodation of the public requires that cars half filled, or even empty, shall sometimes be run over a portion of a railroad. And this fact is fully recognized in practice by the managers of the Boston & Albany Company as well as by others; and in dealing with places on their own branches, resembling Marlborough in importance, they act upon this well-grounded rule.

In deciding the question we should consider as one element the number of Boston & Albany passengers that occupy the cars as far as South Framingham. It is said, on the other hand, that many of them use "cut tickets," and it was shown that one of the petitioners uses them for himself and family. The practice in this respect is peculiar. The two railroad companies have adopted for general use mileage tickets at two cents per mile. In addition to this the Boston & Albany has a system of cheap suburban package tickets, by which the fare for 13 miles, to or from Rice's Crossing, an unfrequented station, is only 11 cents. And these are good not only on local trains, but upon express trains which do not stop at Rice's Crossing.

Thus passengers can obtain a great reduction, riding from Boston to Marlborough for 49 cents, and making the round trip for 98 cents, while the regular rate is \$1.50. It is said, for the Boston & Albany, that these passengers are defrauding the company, and ought not to be counted for any purpose. But whatever the Old Colony Company may say about this, the Boston & Albany cannot complain that passengers use an ingenious and cheap device planned and offered for their acceptance by the company itself. While the Boston & Albany managers maintain this peculiar system they cannot exclude from reasonable accommodation those who adopt it. Still less can they exclude from fair accommodation a community, because some



of its members have been led to accept this cheap rate. And, at all events, they cannot prevent these passengers from being counted as a portion of the occupants of their cars. They help fill the train between Boston and South Framingham and they are riding on terms offered by the Boston & Albany Company.

Finally, upon the question of reasonable accommodation for the petitioners, the Board has the unbiased testimony afforded by the course of the managers of the Old Colony Railroad in this matter. The desired accommodation will cost them as much as it will the Boston & Albany. They can have no possible motive in favoring the petitioners except the desire to furnish proper facilities to the public. They can gain nothing except the indirect gain to every company that heeds the reasonable requests of the people. Their desire to grant this request is independent and practical testimony to show that it is reasonable.

The Board have, therefore, issued a formal recommendation that the prayer of the petitioners be granted.

By the Board,

THOMAS RUSSELL, *Chairman.*

Oct. 12, 1885.

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JOHN H. PAYNE AND OTHERS *v.* NEW YORK & NEW  
ENGLAND RAILROAD COMPANY.

John H. Payne and others, including twenty-one householders, ask a recommendation to the receiver of the New York & New England Railroad Company not to discontinue the station at Forest Avenue, as he proposes to do. It was established two and one-half years ago. It is five and three-quarter miles from Boston, about half a mile measuring on the track from Dorchester station on the one side and from Mattapan on the other. During this time 40,000 tickets have been sold, — mostly package tickets, costing seven cents each. The receipts for the year ending Sept. 30, 1884, were \$868; for the next year \$1,450. Seventeen trains each way stop daily at this station. The deed for the land recites a consideration of \$1, and contains a plan of the station and this clause: "It is hereby agreed that said parcel shall be used for passenger and freight depot business, but not for freight only." The petitioners complain that the discontinuance of this station will compel them to travel eight to fifteen minutes over a bleak and disagreeable road, and by a way which women cannot safely take at night; that it will compel some of them to leave and

to sell their houses at a great loss ; that it will be difficult to procure or retain domestic servants ; that tenants threaten to leave ; and they say that several houses have been built there which would not have been built but for the existence of the station and the implied promise that it would be continued. On all these points the testimony was unusually full and clear. It was shown also that some residents had bought land and built houses on the assurance of a former general manager that a station should be placed there.

After a hearing and view, the Board is of opinion that the petitioners have shown a very strong case. This is not the question of a new station, but of the maintenance of one already established, which has drawn around it a settlement by people who built upon the faith that it would be continued. It is true that the legal period of five years has not elapsed. If it had there would be no need to apply to this Board. The law may be invoked for decaying stations where traffic has been withdrawn. Wisely or not, a five years' station is absolutely protected by law, whatever the amount of its business may be. It ought not to be necessary to invoke the law to protect the members of a thriving and growing community like this. Under the policy of a former management these parties were induced to make large investments on this spot. The recorded deed showed then a carefully worded promise of a passenger station. Promises were given as an inducement to build and were accepted. Building in that faith they have an equitable claim on the company, from which it is not released by a change of management. The policy of justice, which does not change with the management, requires that the reasonable promises, expressed or implied, made by one manager should be carried out by his successors. In addition to this, the fair accommodation of the public calls for the continuance of this station ; and, on comparing this with other suburban points, abundant precedents will be found for the maintenance of stations at equally short distances from neighboring stations. The fact that an absurdly great number of trains have stopped at this point, reducing the average receipts of each to a very small amount, is not a reason for cutting them all off. And we recommend that, instead of discontinuing it, a reasonable number of trains should continue to be stopped at this station.

Ocr. 30, 1885.

[F.]

## PASSENGER AND FREIGHT RATES.

SELECTMEN OF NATICK *v.* BOSTON & ALBANY RAIL-ROAD COMPANY.

The petitioners complain that passenger rates between their town and Boston are unreasonably high, and ask a recommendation for their reduction. Natick is a thriving town of 8,500 inhabitants, devoted to the boot and shoe business, and distant from Boston 17.41 miles. The case was fully presented by counsel. To show the unreasonableness of the rates charged, a comparison was made with the rates from points nearer Boston. The following table will sufficiently show the ground of complaint :

STATIONS.	MILES FROM BOSTON.	SINGLE FARE.	RATE 10-RIDE TICKET	RATE 100-RIDE TICKET.	RATE PER MILE 100-RIDE TICKET.
		Cents.	Cents.	Cents.	Cents.
Cottage Farm, . . .	2.91	7	6.2	6.00	2.06
Allston, . . . .	4.12	9	6.2	6.00	1.45
Brighton, . . . .	4.86	10	8.1	7.65	1.57
Faneuil, . . . .	5.66	12	10.0	8.25	1.45
Newton, . . . .	6.90	13	11.3	8.75	1.27
Newtonville, . . .	7.97	15	13.0	9.25	1.16
West Newton, . . .	9.04	17	15.0	9.75	1.08
Auburndale, . . .	10.14	19	16.5	10.45	1.03
Riverside, . . . .	10.71	21	18.0	10.45	0.97
Rice's Crossing, . .	12.35	30	24.0	11.00	0.89
Wellesley Hills, . .	13.35	32	28.8	*10.49	*0.78
Wellesley, . . . .	14.59	34	30.6	*10.96	*0.75
Natick, . . . .	17.43	40	36.0	*12.34	*0.71

\* Season tickets.

Another table was offered showing the passenger traffic of each station, as follows:

## SINGLE TICKETS.

STATIONS.	NUMBER.	RECEIPTS.
Cottage Farm, . . . . .	19,757	\$1,382 99
Allston, . . . . .	64,507	5,805 63
Brighton, . . . . .	50,973	5,097 30
Faneuil, . . . . .	1,218	146 16
Newton, . . . . .	173,132	22,507 16
Newtonville, . . . . .	61,039	9,155 85
West Newton, . . . . .	77,323	13,144 91
Auburndale, . . . . .	43,191	8,206 29
Riverside, . . . . .	4,863	1,021 23
Rice's Crossing, . . . . .	890	267 00
Wellesley Hills, . . . . .	11,901	3,808 32
Wellesley, . . . . .	40,554	13,788 36
Natick, . . . . .	57,007	22,802 80

## TEN-RIDE TICKETS.

Cottage Farm, . . . . .	34,180	\$2,153 34
Allston, . . . . .	228,320	14,384 16
Brighton, . . . . .	53,010	4,293 81
Faneuil, . . . . .	29,240	2,924 00
Newton, . . . . .	122,070	14,282 19
Newtonville, . . . . .	48,880	6,354 40
West Newton, . . . . .	34,620	5,193 35
Auburndale, . . . . .	24,990	4,113 35
Riverside, . . . . .	3,970	714 60
Rice's Crossing, . . . . .	1,920	460 80
Wellesley Hills, . . . . .	7,820	2,252 16
Wellesley, . . . . .	12,380	3,788 28
Natick, . . . . .	6,670	2,401 20

## HUNDRED-RIDE TICKETS.

Cottage Farm, . . . . .	9,100	\$546 00
Allston, . . . . .	68,600	4,116 00
Brighton, . . . . .	13,300	1,017 45
Faneuil, . . . . .	19,200	1,584 00
Newton, . . . . .	410,000	35,875 00
Newtonville, . . . . .	229,800	21,256 50
West Newton, . . . . .	230,700	22,493 25
Auburndale, . . . . .	172,000	17,974 00
Riverside, . . . . .	39,000	4,075 50
Wellesley Hills, . . . . .	*38,556	*4,046 00
Wellesley, . . . . .	*23,490	*2,573 75
Natick, . . . . .	*55,566	*6,860 00

\* Season tickets, three months, or 162 rides.

The petitioners claim the desired reduction as a right, upon the ground that the present rates are unreasonable.

1. There is no ground for the claim that the price of single tickets is in itself unreasonable, as compared with rates for a like distance on other railroads. They are considerably less than the average, and only a little more than the 2-cent per mile rate of the 1,000 mileage tickets, which is a low, wholesale rate. The 162-ride tickets are also exceedingly low, giving transportation at the rate of  $\frac{79}{100}$  of a cent per mile. Many citizens who visit Boston only occasionally contrive to travel at a moderate cost by using mileage tickets to Rice's Crossing, and then availing themselves of the cheap package tickets from that point. The complaint is that 100-ride tickets are not sold for Natick passengers as they are for Newton and other stations nearer to Boston than Natick is.

The claim is that these low rates constitute a discrimination which is hurtful to Natick as a place for residence. The Board have no doubt that there may be cases where a sharp and excessive increase of passenger rates between two stations, although not forbidden by statute, may be unjust to the place discriminated against, and therefore unreasonable.

On the petition of the Arlington selectmen the Board say :

“It appears, therefore, that to the rate for a passage of  $6\frac{1}{2}$  miles to Arlington Centre, 57 per cent. is added for the  $1\frac{1}{2}$  miles beyond Arlington Centre. The passenger riding on a 100-trip ticket to the Centre pays \$1.23 for a hundred miles. The passenger continuing his ride to the Heights pays \$3.66 for his hundred miles which he rides between those two stations. No good reason is given for this discrepancy.

“The two places, Arlington and Arlington Heights, are competing with each other for residents. The discrepancy in the price of tickets is an undue advantage to one and a prejudice to the other. This, in regard to passenger rates, is not forbidden by the words of any statute. But it is unfair and unjust, and therefore unreasonable, to impose such a disadvantage upon any place.

“The testimony shows that a large number of persons live at Arlington Heights whose daily business calls them to Boston — a larger number in proportion to the whole number of passengers than those residing in Arlington Centre. This is the class in whose favor the system of low suburban mileage is sometimes established. Without deciding that this discrimination can never be properly allowed, it is enough for the present case to say that, in our view, so great and sudden an increase of the mileage rate can never be justified, and that



here there is no one circumstance to justify it." [Sixteenth Annual Report, p. 142.]

A like decision was made on the Winthrop petition, where 6 cents was charged for a ride of  $5\frac{1}{4}$  miles to Crescent Beach and  $5\frac{3}{8}$  cents for  $8\frac{4}{5}$  miles to Lynn.

But when the people of Weston demanded a share in the low "suburban rates" enjoyed at that time by the people of Waltham, the Board said:

"No law of this State requires that fares shall be strictly proportional to distance. No law forbids the adoption of low fares for densely settled towns like Waltham, within what is fixed as a suburban district. Nor is it required that such low fares shall be continued all along the line of the road.

"If such were the law, it would forbid the fixing of low rates — in some cases as low as five cents for five miles — by which it is proposed to furnish workingmen and others of moderate means, doing business in Boston, with an opportunity to live more cheaply and healthfully in the country, sometimes even going home at noon for dinner, and thus improving on the idea of 'workingmen's trains.' This experiment is now in progress, and much is hoped from it. The Board would be sorry if any rule of law or equity called upon them to discourage it. But it is evident that such a system of low fares must have geographical limits. If the next station demands proportional reduction, so will the next to that; and the whole tariff must be sacrificed in order to establish a low suburban fare." [Thirteenth Annual Report, p. 125.]

The Board believe that these decisions are founded in principle, and that they do not demand or justify the granting of this application.

1. The reasons of railroad managers for fixing low suburban fares (apart from the idea of competition with other roads for residents and with horse railways for business) are the great volume of passenger traffic afforded by those suburban places where the head of almost every family spends his days in Boston, and the desire to increase the numbers of that class.

In Natick, owing to its distance from Boston and the business character of the place itself, the number is not such as to call for action. Only 85 men use season tickets in any form. In Newton these passengers are counted by hundreds.

2. The results of extending the low rates indefinitely can be seen by a simple computation. The people of Natick claim a right to ride

for one cent per mile, or considerably less, because their suburban neighbors do so. If this claim is granted, it must next be yielded to the people of South Framingham; and this was not desired by the petitioners. But the same rate would be demanded first for Ashland, then for Westborough, and next for Worcester; and there is no principle of law and no sound reason which would prevent its extension over the whole road. But even the Boston & Albany Company cannot afford to transport its passengers at the rate of a cent a mile. And if this road were compelled to do this on a claim of right, all the other roads that have adopted the system of low suburban rates must do the same. And the result would be general railroad bankruptcy.

It is evident, therefore, that if a continuance of this system were found to compel an indefinite extension of proportionally low fares, the result would be not that extension, but the abolition of the system itself. And this has led the Board to consider the question carefully; for it would be no light matter to break up a practice which, in some form and to some extent, exists on all our railroads, and also on the railroads of other States and other countries. It is a system to which householders have trusted in selecting their homes, and by which communities have been built up and have flourished. The question before us is not whether it has been carried further than was wise, nor is the correctness of its details subject to our criticism. The relations of the petitioning town to Boston and to the villages of Newton exclude questions that have been raised in other cases. The single claim is that a railroad company giving low rates to stations within twelve miles is bound to extend them beyond that distance. The petitioners stand on "the rule of three," and demand proportional fares as a right.

One answer to this in Massachusetts is the policy adopted by the State encouraging residence in the suburbs for the families of those whose days must be spent in the city. The law-giving power has deemed it important that the men whose avocations compel them to visit the metropolis every day should, with their families, enjoy the fresh air and other advantages of country life. And to this end the State has departed from its almost invariable rule, and has fixed a rate for certain trains, which every company whose road terminates in Boston must run if such trains are desired. The rate is as low as a cent a mile. The hours fixed indicate a desire to accommodate men who labor with their hands; and the popular name of "working-men's trains" has been given to these statutory facilities. But no word in the law confines their benefits to any one calling, or shows a disposition to engage in "class legislation."

While this statute is in force, no railroad company here can be cen-

sured for moving in advance of legislation, and extending the benefits of the act in a manner strictly analogous to this benevolent law.

And when the puzzling questions are asked: "Where shall the limit be fixed?" "Shall a fraction of a mile in distance deprive a place of the favorable rate?" "How can you stop if you once begin?" the answer is easy: So long as the railroad managers abide by the limit fixed by law, and do not give a suburban rate beyond twelve miles. The Boston & Albany does not extend its system beyond this point. Whether it was wise in extending the low rates beyond the stations for whose benefit they were especially established, and whose volume of passenger traffic justified this establishment on general railroad principles, we are not called upon to decide. The claim in behalf of Natick is not founded on any such small point. It does not depend upon any rivalry with Riverside or Rice's Crossing.

The rates at these unimportant points may be too low, and may be inconsistent with the general system. They are said to arise from an attempt to combine two opposite schemes—one an old plan by which the rate per mile was reduced as distance increased; the other, the suburban system of low fares for short distances. The result may be somewhat inconsistent and fantastic. But the action of this Board is not invoked for such cause. We are not called upon to correct an inequality in fares unless it injures some one. These rates harm no one.

Upon the whole case, the Board cannot say that the fares complained of are unreasonable, nor can we recommend the reduction for which the petitioners ask.

By the Board,

THOMAS RUSSELL, *Chairman.*

FEB. 25, 1885.

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## RATES FOR TRANSPORTATION OF YOUNG ANIMALS.

A legislative order, designed to secure reasonable and equal rates for the carriage of young animals bought for breeding purposes, was sent to the committee on railroads, who, after a partial hearing, referred it, with the assent of all parties interested, to this Board. The case was well presented by the secretary of the Board of Agriculture, who was supported by prominent raisers of improved stock. The need of application to any tribunal in this case arises from the fact that, while the rate of transportation is of interest to a large number

of farmers scattered over the whole State, and while the aggregate results are of great interest to the community, each individual transaction seems insignificant, so that in treating for rates the farmers find it hard to secure a respectful hearing. To gentlemen dealing with a "great volume of traffic," and conversant with through rates, it seems a small thing to fix a fair price for conveying a young Jersey or Ayrshire from one farm to another, especially as this is not a desirable class of freight. But the Commonwealth looks to just such "petty affairs" with care, and has taxed her people to promote just such interests. Here the parties do not ask bounty or favor, but simple justice.

The complaints were directed chiefly against the Boston & Albany and the New York & New England roads. In general, the parties present were satisfied with the conduct of the other companies, and they expressed entire approval of the course pursued in this matter by the Old Colony and the Fitchburg.

The chief grievance was the rate for carrying young neat cattle, which are rated as adults at a very early age. And all the stock raisers present declared that it was a serious obstacle to the improvement of stock in this State. Even when these gentlemen were willing to give away calves of good stock, as they often did, the farmer frequently declined the gift, because he could not afford to pay for transportation. Such a fact throws light upon the motives of the complainants, as well as upon the effect of the rates complained of. One of the witnesses also stated that he could obtain fair prices for himself by his influence as a large shipper of other merchandise. He sought for others the same rates that he could obtain. Such men deserve an attentive and respectful hearing.

The charge of discrimination was not definitely made against any one corporation, and may be regarded as waived. Unreasonable charges were proved, as follows: 1. The Boston & Albany Railroad Company charges, for a calf not over three months old, at the rate of 400 pounds; for a calf over three months old, 3,000 pounds. The change of this rate is sudden, arbitrary and excessive. The result appears from the statement of the freight agent, that to carry a three-months-old calf between Boston and Worcester costs 48 cents. For a calf over three months old, the cost is \$3.60.

In answer to this, it is said that calves of any age can be carried in crates or boxes at their actual weight, at a rate as low as can be desired. But the farmers reply that the cost and trouble of boxing an animal are such as to generally forbid this mode of transportation. It is also said that there is no practice of returning the package such as prevails in some analogous cases, and that when the crate is too heavy the whole package is sometimes refused and left on the plat-



form, causing suffering to the animal and loss to the owner. There is also objection to placing the larger calves in boxes. There seems to be no reason for the arbitrary rule which charges a sevenfold rate for the animal that is more than three months old.

It should be added that the parties interested had never complained to Mr. Mills, the traffic manager of the Boston & Albany, but had dealt only with local agents. If they had appealed to Mr. Mills, it is probable that they would have secured satisfactory action. It is certain that they would have received a respectful hearing.

On the New York & New England road no arbitrary line is fixed. But the general freight agent said that he fixed the dividing line as to rates at the age of six months, so that the freight of a calf to Webster would be 90 cents, if under that age, and \$5.40 if it had reached that age. The objection that the point is arbitrary and the increase excessive applies to this rate also; and if, as we understand, it is left to every station agent to decide at which of the two rates an animal shall be carried, the practice naturally gives rise to altercation, to favoritism and to hard feeling.

The agent of the Old Colony Railroad writes: "We follow the old farmer's rule. The first season we call them calves, and the next season yearlings, and the next two-year-olds." There is a pleasant flavor of common sense in this. Certainly there can be no reason for having the sharp rise in rates take place on one road at the age of three months, and on another at six months, while on a third it occurs when the animal becomes a yearling.

2. The practice of charging for a colt the same rate as for a full-grown horse is also objectionable. It seems natural to object, as one of the witnesses did, to the charge for a foal as weighing a ton.

The Board recommends for all young animals graded rates dependent upon weight. This will be just in each case, and therefore satisfactory. And it is hoped that by agreement on the part of the New England freight agents for different roads, and assented to by their respective companies, these rates may be extended to points far beyond the jurisdiction of this Board. No objection was made to the conventional weights adopted for full grown animals. The charges for "crated" animals are satisfactory, and should not be substantially changed. Of course rates should be set forth as they will finally be given. And the amount to be paid should not be fixed by a long correspondence, but should be ascertained by inspection of the tariff.

3. Discussion was had as to the practice on some roads of requiring a man to accompany a horse in a freight car. But it was not properly before the Board. Nor was it clearly shown that this practice, although onerous in case of cheap animals, was so unreasonable as to call for any recommendation.



4. Inquiry was made as to the practice of agreeing upon an arbitrary value for the purpose of transportation, with a view to reducing the cost, and limiting the damages recoverable in case of loss. The courts have decided that such an agreement is binding. And no question need arise as to this convenient usage.

By the Board,

THOMAS RUSSELL, *Chairman*.

FEB. 27, 1885.

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#### A. HANKEY AND OTHERS *v.* BOSTON & ALBANY RAILROAD COMPANY.

The complainants are three manufacturing firms at Rochdale, nine miles west of Worcester, on the Boston & Albany Railroad. Together they consume over 1,000 tons of coal in a year. About two-thirds of this comes by rail, and all would do so but for the high rates. The charge for the conveyance of coal delivered in cars to the Boston & Albany Railroad at Worcester is 80 cents for a net ton, or 89 $\frac{6}{10}$  cents for a gross ton of 2,240 pounds. This charge is apparently excessive, and there is nothing in the case to excuse the exorbitant rate. The industry and traffic of the place depend upon the business of the petitioners, and both the materials and the products of their mills are conveyed over the road of the respondents.

The heavy grade between Worcester and Rochdale was given as a reason for the high rate. But it appeared that rates from Rochdale to Worcester were not reduced on account of the favorable grade, and that on this, as on the generality of roads, a mile is considered as a mile, without regard to grade.

The coal is purchased in considerable quantities at Worcester, and delivered to the Boston & Albany loaded in cars, and generally in lots of a few cars. But it was not claimed that the size of the lots affected the rate. The small number of cars delivered was for the convenience of the railroad quite as much as for the purchasers, who had capacity to store hundreds of tons. And two of them stated that if it was desired they would ship 100 tons at a time. It was also stated for the road that their "cargo rates" did not depend at all upon the number of carloads ordered, and that the rate for coal delivered from the barge or vessel was the same, whether the consumer took 10 tons, or 50 or 100.

Of course rates for short distances cannot be founded on rates for long distances. The cost of hauling over a long and a short route is by no means proportional to the number of miles. Terminals in one

case cover a large number of miles, and in the other case a small number. But the minimum charge which has been found proper in such a case as this falls far below the rate demanded. A table shows several such charges:—

ROAD.	HAUL.	DISTANCE.	RATES.
Old Colony, . .	Somerset to Taunton, .	9 miles.	50 cents.
Boston & Lowell, .	Boston to Winchester, .	8 "	50 "
Boston & Lowell, .	Boston to Woburn High-lands, . . . .	9½ "	55 "
Boston & Lowell, .	Boston to Woburn, . .	10 "	65 "
Boston & Maine, .	Boston to Wakefield, .	10 "	60 "
Eastern, . . .	Boston to Lynn, . .	10 "	50 "
N. Y. & N. E., . .	Boston to Hyde Park, .	8 "	60 "
N. Y. & N. E., . .	Boston to Readville, .	9 "	60 "
Fitchburg, . . .	Boston to Waltham, . .	10 "	70 "

The petitioners also referred to the charge on the Boston & Albany itself for hauling coal from Hudson to Mellenville, nine miles, on a branch. The rate is 57 cents for a gross ton.

These cases are not precisely similar to the one before us, and these rates cannot be taken as an exact rule: (1) "Because transportation from an important terminal point can be done at a lower rate and at a greater profit than business from one way-station to another, and transportation on the main line from a chief terminus of a road is generally done at a lower rate than that on a branch road. The simple reason is that there is more business to be done, and therefore the road can afford to do it at more favorable rates. (2) When coal is transported from Boston inland, or from Salem or Somerset, the railroad makes an additional profit for its services as stevedore, and when one transaction insures another with a second profit, business can of course be done at a lower rate than when such second profit is not to be had." (Twelfth Report, p. 211.)

Yet Worcester is more than a mere way station. It is a terminal to some roads, and an important centre of distribution for all the roads that radiate from it. And many considerations that apply to freight sent from the metropolis apply to traffic originating in Worcester.

The comparison that shows most palpably the unreasonable nature of this charge is that which contrasts it with the rate from East Boston to Worcester. There the rate is 90 cents for 50 miles; here it is  $89\frac{6}{10}$  cents for nine miles — a difference of only four mills. Making all possible allowances, there is nothing to justify such an enormous discrepancy as this, which charges the Worcester customer 1.80 cents per mile, and imposes upon the men of Rochdale 9.95 cents for the like service.

It is evident that the reason for this excessive charge is the absence of competition and the belief that the people of Rochdale have no remedy. The extensive and long continued practice of this road and of others shows what rates are reasonable, and shows that these are unreasonable. We quote once more from a former report: "It was also argued that all the business referred to in the above table was done under competition, and that it therefore afforded no just standard for comparison with a case where, from circumstances, the railroad has a monopoly of the traffic; but the Board cannot assent to this reasoning. No doubt there are cases of exceptional competition, partial and limited in time, which would not be fair subjects for comparison in order to establish reasonable rates. There are cases where a temporary object is sought, wisely or unwisely, by an excessive reduction of rates. Such cases furnish no fair ground of comparison. But where the business has been carried on for many years, and where many lines are concerned, it must be held that the rates so fixed and continued are reasonable. It cannot be assumed that many railroad companies have for a long term of years persisted in wronging their stockholders by doing a vast business at rates unremunerative and unreasonably low. And the Board cannot assent to the proposition that rates which are reasonable for the body of the community may be disregarded whenever the existence of a monopoly of railroad service exempts any particular line from all competition."

If these views are abandoned, no rule is left except the arbitrary one sometimes set up of charging "all that the traffic will bear"—or, in other words, of charging what the necessities of consumers compel them to submit to. This has long been made unlawful in this State, and subjected to a penalty for every offence. The rule requiring reasonable rates is much older than our statute. The often quoted words of the English judge need to be repeated whenever the unfounded claim of a right to levy arbitrary rates is set up: "I would not, however, have it understood that carriers are at liberty by law to charge whatever they please; a carrier is liable by law to carry everything which is brought to him for a reasonable sum \* \* \* and not to extort what he will."

These words date from 1810, and are good law to-day. It is not

always easy to apply the relative terms "reasonable" and "unreasonable." But here there is no difficulty.

At the hearing the traffic manager of the Boston & Albany offered a rate of \$1.35 from East Boston to Rochdale — only 45 cents more for the 59 miles than the 90 cents to Worcester, 50 miles. But without calculating closely the advantages or disadvantages of such an offer, the petitioners at once rejected it. They are accustomed to buy at Worcester; they desire to inspect coal before buying it, and to use a small quantity as a sample. They prefer to deal with men whom they know and like. The same may be said of Hudson coal, which can be delivered at Rochdale for \$2.02 freight. The petitioners do not wish to deal at Hudson. And one of the petitioning firms, whose products (machine knives) are known all over the world for their temper and finish, cannot use the coal that is sold at Hudson without impairing the quality of its work. They have a right to use what coal they please, and to buy it where they please, and to have it carried at reasonable rates by the common carriers, who are public servants. And the carrier has no right to make a discriminating charge in order to favor his own business, and to secure a longer haul over his route. It is their right to have, and the carrier's duty to give, a fair rate. The fact that it is the interest of the company to have coal bought at Hudson or at Boston does not give a right to discriminate against Worcester by exacting an unreasonable rate for coal sold in that city, nor to charge an excessive price to the petitioners when they demand a right secured to them by common law and by the statutes of Massachusetts.

Finally, the Board informs the Boston & Albany Railroad Company that it considers it as proper, reasonable and desirable that the rates for the transportation of coal by the carload from Worcester to Rochdale be reduced by at least 25 per cent. from their present charge of 80 cents per net ton.

By the Board,

THOMAS RUSSELL, *Chairman*.

MARCH 18, 1885.

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#### SELECTMEN OF MEDFORD v. BOSTON & MAINE RAILROAD.

The selectmen, acting on the petition of several citizens, complain that the long established usage of selling scholars' tickets at half rate for children seeking instruction in Boston has been discontinued, and ask a recommendation that it be renewed.

The general quarterly rate between Boston and Medford was, be-



fore the change, \$11, and the school rate \$5.50. The present rate is \$7.50 for packages of 100 tickets. Making due allowance for days of non-attendance, the additional cost during a quarter would be a little less than \$3. This is not a great amount for each scholar (nor for the company), but there are families where such items are not disregarded. The views of the Board upon a like question have lately been set forth in a special report.

“The general rule of our railroad managers has been to give half rates to young persons going to and from any place for education, including not only attendants upon schools, but also persons seeking mechanical and other practical instruction. This is in accord with the ordinary railroad policy, which looks to the increase of business caused by such a reduction of fare. But the practice, as we suppose, is founded on a broader principle—the policy of favoring education, and thus developing the resources of the State.

Under the power of the State over railroad operation, cheap morning and evening trains have been made compulsory, upon certain conditions, simply because it is for the welfare of one class of people that such trains should be run, without regard to their profit. Upon a policy settled for more than two centuries, that of making education accessible to all, reduced fares for school children might well have been required by statute, if railroad managers had not forestalled legislative action by establishing such rates of their own free will.

We do not need to argue this question at length, for we are not proposing an innovation but resisting one. A conservative policy, when it finds a practice well established and working well, allows it to continue, although it does not strictly accord with “the rule of three.” When we find a universal rule among railroads to adopt a lower rate for one class of travellers, we may assume it to be reasonable; and in this case we find it sustained by all the honored traditions and wholesome prejudices of the State. As a matter of authority, the long continued and widely extended rule is a precedent rather than the recent and partial exceptions now introduced upon a few roads. Certainly we may assume that the rate paid by scholars so long was not too low. In a season of reduction a sharp increase of a rate calls for strong evidence to support it.”

In this case the president of the Boston & Maine Railroad gave as reasons for the innovation: 1. The desire for uniformity in tickets and fares. 2. That it is unfair and “undemocratic” to give a privilege to students which is not given to young persons learning a trade. 3. That each town, and especially Medford, maintains good free schools, and that those who seek better instruction can afford to pay for the cost. 4. And chiefly that it costs as much to carry a boy as a man,



and that the passenger's errand does not affect the cost of transportation. And the president added, with admirable frankness, that in his view all lower rates for scholars ought to be abolished on the whole line, and (so far as his opinion went) on all roads.

1. As to uniformity of tickets, this only saves a little trouble, and, as we have said before, the slight trouble ought to be taken for the sake of the good to be secured; and we refer to the example of other railroad companies, such as the Boston & Providence, where the two systems of package tickets and of half rates for scholars are in full force side by side.

2. The same examples are of force as to the inconsistency of granting half rates to scholars, while they are denied to young persons learning a trade or entering on mercantile life. The excellent rule in force on these other roads is set forth in these words, applied to half-fare tickets: "for the sole purpose of attending school or following a regular employment." They recognize the fact that all education is not found in schools. If the old rule of the Boston & Maine was not broad enough, liberality in this direction will remove all inconsistency.

3. The free schools of our towns are admirable, but some of the institutions for higher learning and for technical instruction in Boston have been largely aided by the State, certainly not with the idea that their benefits should be monopolized by residents in Boston, or by those whose parents can afford to send them to Boston without regard to cost. It is not "undemocratic" to place the best instruction within reach of the poorest child. Everything, great or small, which tends to give the most thorough education to every child, is in the best sense truly democratic.

4. The gravest question relates to the general practice of cheap school transportation. The candid avowal of the president makes it desirable to consider this more fully than heretofore — the more so in view of the recent enlargement of his line. We also learn that these views are shared by individual directors of another great railroad company, whose simple refusal to comply with a recommendation on this subject was accompanied by no formal statement of reasons. They claim that the railroad companies paying general taxes for the education of youth ought not to pay additional taxes in the guise of cheap transportation for pupils. This "new departure" calls for a discussion of elemental and familiar doctrines, and the time for discussion is the time when the innovation is begun.

We have supposed that cheap rates for scholars, aside from business reasons, depended upon the principles which from the earliest time have justified taxes for the education of the young, — taxes on the property of the rich for the education of rich and poor alike; taxes on the property of childless persons for the education of children.

1. Education develops the resources of a people, and increases general prosperity, population and traffic. The people of this State were once taxed to aid railroad enterprises, then struggling and doubtful, upon this single ground of development and of final benefit to all. The beneficent results of general education to the whole people were never doubtful.

2. The security of the State is promoted by general education, — especially the security of property, and more especially that artificial form of property which consists of franchise or chartered rights. These have no worse enemy than ignorance. And that is a dangerous form of radicalism, which, for the sake of a mere theory, deserts the old ways, and which denies the interest of all in the education of all.

3. The practice of cheap school transportation is very general. All over the State, wherever there is an academy or seminary of any kind, low school rates are allowed. In many of our towns, high schools are required by law; in others they are permitted. The burden of taxation upon the outlying districts, which would otherwise seem unfair and intolerable, is lightened by these low rates, sometimes paid by the parents, often by the town. The amounts saved may seem small, or even be a matter of jest, to many railroad managers. But they are not insignificant in communities where rigid economy is necessary to existence, or in families whose rule is close saving to secure liberal education for the children. This neighborly arrangement, and the kindly feelings which spring from it, are not without value to the railroad companies. A prudent conservatism will hesitate before it disturbs these relations.

4. The advantages resulting from general education would justify the State in using its undoubted power to enforce cheap transportation to and from its schools and seminaries. It is far better that this should continue to be done by the free choice of the companies themselves, and a system which has worked so well should not be disturbed or threatened.

The Board feel that action in this matter affects not only a score of children in one town, or a few more in the other towns, that have formally or informally applied for redress, but that it concerns the whole community. And we earnestly recommend to the president and directors of the Boston & Maine Railroad a prompt return to their old system and to their old rates for children using their road on their way to and from school.

By the Board,

THOMAS RUSSELL, *Chairman.*

WORTHY PAPER COMPANY AND OTHERS *v.* BOSTON &  
ALBANY RAILROAD COMPANY.

The manufacturers of West Springfield and Agwam complain that the charge for hauling coal by the carload from Springfield is excessive and unreasonable, and ask a recommendation that it may be reduced. The selectmen of West Springfield file a similar petition.

The charge is 45 cents a ton; the distance is  $2\frac{1}{4}$  miles, and the quantity brought to manufacturers and dealers in a year amounts to some thousands of tons. It comes to New Haven in barges, and is sent to Springfield in batches of cars, according to the convenience of the New York, New Haven & Hartford Railroad, each cargo of 125 or 150 tons being all delivered in the course of a day, or at most within 24 hours. Generally it is switched into the lower yard, from which it is brought by the Boston & Albany Railroad to their upper yard, where it is placed in trains for West Springfield.

The question here relates to the proper minimum charge of such service. Nothing can be learned by comparing it with longer hauls. And to compare it with through rates is utterly useless. No one would ask, as a general rule, that the charge for carrying freight ten miles should be the one-hundredth part of the charge for 1,000 miles. Still less would it be claimed that where \$10 is charged for 1,000 miles a cent is therefore the proper charge for a haul of one mile.

Terminal charges are a large part of a short-haul rate, and a slight part of a long-haul charge. The switching, also, for the short distance, bears a high proportion to the whole cost. This is true generally, and specially true in this case. And the universal practice of railroad managers, with the general acquiescence of customers, establishes the propriety of a minimum charge for a short distance, not depending upon mileage.

A table annexed gives several such rates, including the lowest that can be found. This table does not show or tend to show that the charge in question is unreasonable. It is true that the practice of other railroads is not conclusive in favor of the company or against its customers. A general practice has more force when cited against a railroad company, for it may be assumed that these corporations will not all do business for a rate too low. But it is quite possible, and it may be claimed in any case, that they all charge too much.

But striking out the testimony as to other roads, there is no proof here of exorbitant and unreasonable charges. Taking that testimony the charge does not appear excessive. The actual cost of hauling two miles and a fraction, with the additional switching, is not much less

than the cost of hauling five, six, eight or ten miles. The trouble of taking freight, delivered, as this is, at the freight-yard, is somewhat greater than that of receiving it at a terminus, where it is taken at the convenience of the railroad company. Such is the case with the low rates given on the Old Colony road and on some others.

The question for this Board is not whether we should, as railroad managers, fix the rate just as it is fixed, nor whether we think that a reduction of a few cents would be wise and desirable. In order to justify our intervention it must be shown that the rate is clearly unreasonable. This is not shown, and the request of the petitioners cannot be granted.

THOMAS RUSSELL, *Chairman.*

JUNE 2, 1885.

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#### H. A. TRAFTON AND OTHERS *v.* BOSTON & MAINE RAILROAD.

The petitioners, fifty commercial travellers, complain (1) that the rates on excess of baggage are too high; (2) that a charge is made for the storage of sample trunks; (3) that a rule forbids the reception of any piece of baggage weighing over 250 pounds. And they ask for a recommendation for a change in these rules.

The second and third complaints may be briefly disposed of. These rules apply to all travellers as well as to the class represented by the petitioners, and they seem to be perfectly reasonable. Railroad companies, in dealing with baggage, are expected to act as common carriers and not as warehousemen. A reasonable time is all that can be expected for the free storage of any baggage, as incidental to the duty of transporting it. On this road the charge for storage begins in twenty-four hours after the midnight following its reception. This is a liberal allowance of time. For anything further the traveller ought to pay, and the charge (twenty-five cents for the first twenty-four hours and ten cents afterwards) is not excessive. The rule works well on this and on other roads.

The rule limiting to 250 pounds the weight of any one piece of baggage is founded on humanity and common sense, and meets our entire approval.

The rates objected to are as follows: —



Where unlimited ticket rate is :			Charge for excess of 150 pounds.
5	to	9 cents	10 cents per 100 pounds.
10	"	14 "	15 " "
15	"	19 "	20 " "
20	"	24 "	25 " "
25	"	44 "	30 " "
45	"	\$1 04	35 " "
\$1 05	"	1 74	40 " "
1 75	"	2 24	50 " "
2 25	"	2 79	60 " "
2 80	"	3 24	70 " "
3 25	"	3 74	80 " "
3 75	"	4 00	85 " "

Little objection was made to the rate charged for any one journey taken as one trip. But it was said that a traveller making several trips from station to station on a ticket for a long distance would be obliged to pay an exorbitant amount. For example, a passenger coming from Portland to Boston, with one hundred pounds of extra baggage, and stopping off at Biddeford, Portsmouth, Newburyport, Salem and Lynn, would be obliged to pay \$1.25 extra. But it is plain that this is not paid without consideration. The traveller, in this case, has made several trips instead of one, and at each way-station his heavy baggage has been handled twice by the railroad company. It is not unreasonable that he should pay for this. The fact that he has secured a personal privilege to stop off himself at several stations, without paying local fares, does not of itself entitle him, as a matter of right, to a like privilege for his extra baggage. The amount exacted does not appear of itself to be excessive.

The petitioners and the respondents each introduced testimony by way of comparison. The petitioners referred to the privileges given to the agents of theatrical companies in respect to baggage. But this comparison is of no value, — first and chiefly, because the privilege is given to them in consideration of the large number of persons who, through their agency, become passengers, and the larger number of passengers, who, in many cases, attend the performances for which they arrange, thus swelling the receipts of the railroad company. The nature of this luggage is also considered ; being chiefly hand-bills, or the appliances for printing them, — not articles of sale or for effecting a sale, but simply the means of advertising, for the joint benefit of the manager and the railroad company.

The respondents refer to the rates charged to local expresses, which are the same for goods in baggage cars as are charged to commercial travellers for excess of baggage. This was not met by the argument that a great express company, paying \$30,000 in a year, carried its



goods for less than the charges complained of. There is no measure of comparison between the two very different classes of contract. And we do not agree to the argument that 2,000 travellers, each paying charges to the amount of \$150 a year, are to be regarded each as engaged in a wholesale business of \$300,000 annually with the railroad.

The respondents also introduced the rates on several other railroads in this State, which were all about the same with theirs, or a little more. And it was not shown that any charged less, in like cases, within the State. The rates for excess on the Boston & Albany Railroad to New York are \$1, which, for the distance, is much less than the amounts charged by the Boston & Maine. The reason for this, no doubt, is the competition of the various Sound lines. This piece of testimony is not enough to prove the unreasonableness of the charge, especially as the charges on the Boston & Albany within the State correspond with those on the Boston & Maine.

Finally, the very large and respectable association of commercial travellers have brought the whole subject of charges for luggage on the Boston & Maine before the Board. The petition referred to a more limited ground of complaint, but the whole subject was discussed, and, after delay, granted at the request of the parties, and a full consideration, the petitioners withdrew their petition, having amicably settled their differences with the railroad managers and having agreed upon satisfactory terms. Of course, this does not bind any individual who thinks himself aggrieved. But it shows the sense of a body whose opinions are worthy of respect, and confirms us in the opinion which we have reached on other grounds, — that the petitioners have no just cause of complaint.

For the Board,

THOMAS RUSSELL, *Chairman*.

OCT. 27, 1885.

[G.]

## EXIGENCY FOR NEW ROADS.

EASTERN RAILROAD COMPANY, PETITIONER FOR A  
CERTIFICATE OF EXIGENCY FOR A BRANCH IN PEA-  
BODY.

The only question before the Board is whether there is an exigency for a railroad between the proposed termini. The route and the question of grade crossing cannot now be formally decided. But where only one route is practicable or contemplated, the practical question is, whether there is an exigency for such a road as is proposed.

Unless there is public need of a railroad, there exists no right to take for it one inch of any man's property against his will. And this need of showing public necessity is founded on a principle much older than the constitution of Massachusetts.

The principle applies whether the road is fifty miles long or fifty rods. Of course the amount of traffic which would justify a short road would not necessarily justify a longer one. But in either case it must be shown that public good demands construction.

The alleged exigency here is, that by giving improved facilities for business the cost of conducting it will be decreased, and its prosperity promoted. The chief party to be directly benefited employs 150 hands, and pays every year \$30,000 to \$100,000 in wages. He will save \$6,000 in reduced cartage and wastage of material. Other parties employing about as many men will save perhaps \$4,000. It is said that this is private gain, and that the right of eminent domain cannot properly be exercised to that end. This argument seems to confound the motive which influences the promoters of the enterprise with the result of it. In most cases of railroad construction, whether under charter or general law, the chief motive of the parties is the selfish one of private gain ; but if the result is an increase of business, of employment and of wages paid, then the public good is promoted.

Anything which builds up and maintains and tends to enlarge an industry has always been held to be a public benefit.

Improved facilities for manufactures are especially desirable in New England. We have many industries whose existence to-day may be called almost artificial. They are conducted far from the points where their products are consumed, and where the raw material is produced, including fuel, one of the raw materials of almost every industry. Thus they are subjected to great natural disadvantages. For these we must make up by every possible saving. To effect these savings, the railroads must allow them every possible facility; and the law and its agents must enable the railroads to do so. Every year competition grows keener, and the margin of profit becomes more narrow. And therefore, every year, it becomes more necessary to supply the place of natural advantages by the use of brains in business. This was the subject of a most eloquent address by Mr. Choate, who once lived in Peabody; and his advice has been followed there as well as elsewhere in New England.

No clearer instance can be found of natural disadvantages overcome by mental resources than in the leather business of this immediate vicinity. It exists in spite of the greater cost of coal, of the raw material and the much greater cost of the bulky article of bark. It has flourished with only one natural advantage, — the constant supply of remarkably pure water, — because it happens to have been established here nearly a century and a half since; and it flourishes now because of the energy, industry and skill with which it is pursued.

But those qualities must be re-enforced by the best facilities known at this time; or, rather, these qualities are best displayed in seeking such facilities. And among the most important of these is the direct connection by rail of the works and the railroad. This is found in possession of the rivals of the Peabody tanners, both in distant states and nearer home. It must be had here, or the industry will suffer.

It is said that those who want these facilities established their works without them, and have done well without them. This argument would prevent any man who is living by his trade from acquiring any new facility or making any improvement. This view, or the want of energy and foresight which is its equivalent, has ruined many a man and many a place. In the close rivalry of competing industry in this country and at this time it is an unsafe and destructive idea.

The Board cannot doubt that there may be a public exigency for a railroad one-fifth of a mile in length, which removes from works employing nearly 300 men an annual tax of \$10,000. The precedents

are almost innumerable in which legislatures and courts have recognized the principle upon which this opinion is founded.

The remaining question is, whether the public need is counterbalanced by any inconvenience. The chief inconvenience in this case is the proposed grade crossing of Walnut Street, which, in leed, we are not asked to grant now, but which seems to be inevitable.

This will not be an ordinary grade crossing. The proposed railroad runs from the yards across this street, into Upton Street, where it is to be laid longitudinally. This can only be done by consent of the selectmen, who have also complete power over the time and manner of its use, including the speed of the train, and who thus control the speed at the crossing. They may, if they choose, order all traffic to be conducted between midnight and sunrise. They may, and probably will, fix the rate of speed as low as three or four miles an hour, with other precautions to prevent accidents. It may be said that we are authorizing one danger because another is to be created. But the law which gives to the town authorities the exclusive right to allow construction through one street, has given them power to enforce such conditions as will prevent danger both in the street that is occupied and in the street that is crossed.

The other objection to this road is that it will incommode the business of a worthy firm that have long done business on this spot. And it is true that their business will be somewhat incommoded, but it will not be seriously affected. And for the obstruction of their right of way they will be entitled to full recompense. As a small portion of their land will be taken, they will also be entitled to receive complete compensation for every other item of damage, including risk of fire and increase of insurance premium. For all damage, present and prospective, they will be made whole; and, comparing the gain and the loss to the business of Peabody growing out of the proposed road, we find a decided balance in its favor. And the Board has therefore granted the certificate asked.

For the Board,

THOMAS RUSSELL, *Chairman.*

JAN. 27, 1885.

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#### ONSET BAY GROVE RAILROAD ASSOCIATION, PETITIONERS.

The only question before the Board is, whether there is an exigency for a railroad between the Onset station on the Old Colony Railroad and the point named for the other terminus; or, in other words, whether such a road is required for the public needs. The

question of route is not before us, and may never come before us. If only one route were practicable, the question would incidentally arise ; for if only one road were possible, the question would be as to the need of such a road as could be built.

The rights of the petitioners and remonstrants are not affected by the fact that a railroad has been constructed without sanction of law. But the existence of such a track does furnish evidence as to its probable future use, its convenience and its inconvenience to the public. Both parties have a right to use this evidence, and both have made use of it.

The Board is of opinion that the association have proved the need of a railroad between the proposed termini of their road ; and a certificate is issued accordingly.

By the Board,

THOMAS RUSSELL, *Chairman.*

SEPT. 25, 1885.



[H.]

## MISCELLANEOUS.

## SELECTMEN OF BROOKLINE, PETITIONERS TO COUNTY COMMISSIONERS.

William Aspinwall, a citizen, taxpayer and land owner of Brookline, files an appeal from the decision of the county commissioners as to a crossing over the tracks of the Boston & Albany Railroad. The selectmen move to dismiss, on the ground that Mr. Aspinwall has no right to appeal.

The question depends upon the meaning of the word "party," in sect. 1, chap. 135, Acts of 1882. The question is novel. No direct decision has ever been made, and, of course, no final decision can be made, except by the supreme court. The section is as follows:—

"Any party aggrieved by the decision or order of the county commissioners in any matter or proceeding arising under sect. 129 and sect. 138 of chap. 112 of the Public Statutes, may appeal therefrom to the Board of Railroad Commissioners."

At first sight it would seem that the word should be taken in its technical sense, and that it only refers to the parties to the record. And in sect. 129, chap. 112, and the following sections, as well as in sect. 135, it is used several times in this sense. But upon examination it appears that in sect. 129 it is also used in its popular and broader sense, and it seems that such a construction applied to the amending statute will best carry out the intent of its framers.

The parties to the record under sect. 129 are the selectmen and the railroad company, but it is provided that "the county commissioners shall, after due notice, hear all parties interested." These are not technical words. If only parties to the record were to be heard, the words "the parties" would have expressed the intent. "All" extends the meaning, and the word "interested" shows more clearly

that the word is here used in its popular sense. So, in the act of 1882, instead of saying "either party may appeal," the words are "any party aggrieved." Taking the two phrases together: "The commissioners shall hear all parties interested," and "any party aggrieved may appeal" — this conveys the idea that any person interested may be heard, and if aggrieved may appeal. And as to hearing, this has always been the construction of this and of like statutes. And persons interested as land owners, whose land is likely to be taken or affected in value, have always been heard. Nor has such a person been admitted as *amicus curie*, or from courtesy, but they have appeared by counsel or otherwise as of right.

The statutes requiring "due notice" have always been construed as requiring public notice, so that others beside the parties to the record may be heard. And having been heard as of right, not merely as witnesses but as parties, it would seem to follow that if an appeal is allowed to any one it should be allowed to those who in pursuance of public summons have been heard. Otherwise the value of appeal would be greatly impaired. The practice in such cases is shown by the form of record used by the county commissioners in such cases — "after hearing all persons and corporations interested." This is found in the judgment appealed from. A like phrase is quoted in *O. C. & F. Railroad Company v. Plymouth*, 11 Gray, 512. And it is believed that such is the universal form of making up a record.

It is certainly the universal mode of conducting a hearing. The selectmen may represent a town, but the inhabitants of a locality in the town may have wholly different views and interests, and they are always recognized as parties entitled to be heard.

When a grade crossing is allowed by the county commissioners, there is technically no appeal. But the consent of this Board must be had; and the people of a locality, or any body of inhabitants, or any one, is heard, whether his views accord with those of the selectmen or not. This is the more necessary, because a town sometimes has numerous villages so distinct that there are seven or eight post-offices, while the town has only three selectmen, who may wholly fail to represent the views of those interested most immediately.

In view of this practice of the Board, and the long continued practice of the county boards, it may well be assumed that the framers of the act intended to give an appeal to the "parties" that have always been notified and heard.

The half admission of the appellees that owners of land to be affected are parties entitled to appeal, conflicts (as far as it goes) with the idea that only parties to the record have that right. But it would be hard to hold that a man whose estate was to be taken or ruined for use was not a party entitled to be heard as of right, or that if any

one could appeal, he could not. One reason for public notice of such proceedings is, that all such owners cannot be known. In analogous proceedings it has been said: "Common justice requires that they have an opportunity to be heard, before any definitive order pass affecting their rights."

"When the owners or occupiers of the land, who are necessarily parties in interest, are not mentioned in the petition, through the ignorance or negligence of the petitioners, no order of notice to them can regularly issue; but if they, in fact, having notice, come into court and show their claim of interest against the prayer of the petition, the court will inquire into their claim, and if it appears to be well founded, will admit them to show cause against the petition; when they shall be deemed parties in all the subsequent proceedings." *Commonwealth v. Cambridge*, 7 Mass., pp. 160-161.

The doctrine of that case would seem to imply that the decision of the county commissioners admitting Mr. Aspinwall as a party, made him one for all purposes. But it is not necessary to rely on this. For it seems to us that, under a true construction of the statute, not only land owners specially interested, but any persons having an interest should be recognized as parties entitled to appeal.

One tax-payer, simply as a tax-payer, may have a larger interest than any land owner. A great majority of the inhabitants may differ from the selectmen. A minority, even a minority of one, has rights.

The statutes in this matter do not distinctly show a design to bind all by the action of the selectmen. The legislature may well have intended to give a practical appeal from their judgment as well as from that of the county board.

The cases cited show that a member of a corporation is not from that fact a party to the record to which the corporation is a party. But they do not touch the question whether in this statute "the words are used in a more popular sense." This is the exception recognized in *Merchants' Bank v. Cook*, 4 Pick., pp. 405-411. And it is unnecessary to consider the dicta in the same decision intimating that when a town is party to a suit an inhabitant is also a party (p. 414). Nor need we refer to the case, cited in the note, of *Russell v. The Men of Devon*, 2 Term Reports, 667, where two inhabitants of a county were allowed to appear in behalf of all, and to demur to a declaration. Such is not now the law or practice where a town or county is plaintiff or defendant in a suit at law. But in these anomalous proceedings, where there is neither court nor plaintiff nor defendant, and where divers interests are concerned, there is good reason for the use of words permitting appearance, hearing and appeal by all interested inhabitants, or even all persons with special interests.

In other sections of chapter 112 relating to like matters, no dis-

inction is made between interested persons and parties. In section 123, as to laying out a railroad over a way, due notice is to be given to all "persons interested." In section 125, relating to the laying out of public ways over railroads, "all parties interested" are to be heard. It cannot be that a different rule is intended in two matters so nearly alike. And if "persons" and "parties" are used interchangeably as equivalents in sections relating to the creation of grade crossings, it is a reason for supposing that they may be so used in a section relating to the abolition or alteration of such crossings.

The argument from inconvenience is of little weight. One party may object to any change, one may desire one method of change, and another may ask a different one. But with more than one appeal, there would be only one hearing. And the inconvenience, if it can be called such, of various propositions heard at one time, exists now, and is only transferred by appeal from one tribunal to another. It is necessary, from the nature of the question, and only by such a hearing can the facts be properly presented and a right decision be reached.

The same answer may be made to the apparent incongruity of having costs possibly incurred and thrown upon the petitioning party by the action of one who is not a party to the record. This now occurs at the first hearing. An opponent, whether he be called *amicus curiæ*, or a party, or a witness, may defeat the application, and so throw costs upon the selectmen, or, in other words, upon the town. This is on the whole at least the best possible approximation to justice. The motion is dismissed because the statute seems to have intentionally included persons situated as Mr. Aspinwall is as parties entitled to appeal. And such seems to be the construction required by justice.

For the Board,

THOMAS RUSSELL, *Chairman*.

APRIL 10, 1885.

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CAMBRIDGE RAILROAD COMPANY, APPELLANT FROM  
ORDER OF BOARD OF ALDERMEN OF BOSTON.

The Charles River Street Railway Company having obtained an order from the aldermen of Boston authorizing the passage of certain cars (not included in the order of the Board), over the tracks of the Cambridge and Metropolitan roads in Boston, the Cambridge Railroad Company appeals.

1. The question was raised whether the appellant is a "party in



terested," and so entitled to appeal. And it was urged that the Charles River Company already has the right to run cars over the tracks of the appellant, and that the mileage compensation for each car is irrevocably fixed so that it has no interest in the matter. But it appears to the Board that the right to run other cars than those heretofore run, with the practical result that more cars will be so run, makes the appellant an interested party, because this increase may cause increased inconvenience to the company, for which no compensation is recoverable. However slight the burden may be, it gives the company an interest to oppose and appeal. The fact that the company has another motive — the fear of losing business — does not deprive it of the right to appeal, although that interest does not give such a right.

2. The appellant claims that the aldermen of Cambridge could not lawfully grant authority to the Charles River Company to run over its tracks with cars coming from the Cottage Farm and Green Street routes, because these are not lines of two consecutive miles, and do not each bring the travel of two miles to the tracks of the Cambridge road which they meet or cross. Consequently, any car coming in under such order is on the Cambridge company's tracks illegally, and should not receive further privileges. Chapter 113, section 48, empowers aldermen and selectmen to authorize a street railway company, "whose tracks have been duly located, and which owns and operates not less than two consecutive miles of track," to enter and use the track of any other company which it meets or crosses. The object was to secure a pledge of good faith and a substantial additional accommodation to the public, and not merely such construction as should enable a new company to share the business and profits of the older one. It is contended that a true construction of the statute requires that the entering road should meet the other road with two miles of consecutive track, measured from the point of intersection, so that it may bring to that point the travel of two miles. Otherwise, it is said, the object of the provision fails, and the word "consecutive" is without meaning. Ingenious as this argument is, and reasonable as such a provision might have been, it seems to be legislation rather than construction to interpolate it in the statute. It might have been there, but it is not. The act applied a very rough and imperfect test of good faith, and made a moderate demand as to new facilities. But we cannot add to its requirements. It does prevent a road with a very short track from gaining the rights of a connecting road. It prevents a road with only a series of short tracks from doing so. But it makes the existence and operation of two consecutive miles the sole condition. The liberal construction of another section of the act in the South Boston Railroad Company and Middle-



sex Railroad Company is in wide contrast with the narrow interpretation contended for by the appellant (121 Mass. 485.) It is said to be absurd that the existence of two consecutive miles of track in Dorchester should justify the connection of a 10-rod track with tracks of another road at the northern extremity of Boston. Probably such a case<sup>1</sup> did not occur to the legislative mind. But under the law, as it is admitted to be equal, absurdities are possible. Cases of hardship and wrong can be imagined under almost all human legislation. The answer to the supposed case is that a wise and honest board of aldermen would not grant the petition. The law does not give the owner of two miles of consecutive track the right to enter another road. It only gives the right to apply to a competent tribunal.

3. If we had more doubt on this point, it would seem that this is not the time or place to raise it. This is an appeal from the action of the Boston aldermen. They find certain cars coming to the city line. They may well assume that these come lawfully, and give permission to run them over certain tracks in Boston. The appeal is from that permission. If the Cambridge grant was unlawful, the question should be tried directly by a proceeding in the court, which is capable of deciding it finally. The numerous decisions that the right of a corporation to exist and exercise its franchises can only be tried on a proceeding directly instituted for the purpose are somewhat in point. It is true that they rest mainly on the ground, that the State may waive its right to a forfeiture. But they rest also on the extreme inconveniences of drawing the party's franchise into question whenever it tries to exert any right. (*Quincy Canal v. Newcomb*, 7 Metcalf, 276-282.) In the case before us, the appellant, by submitting to the entrance of these cars upon its track, may well be held to have waived its objection to the exercise of that right, so far as any collateral proceedings are concerned. At all events, while the appellant permits the Charles River Company to run its cars to the centre of the draw over the channel, it cannot call upon us to forbid passengers from finishing their journey, upon the ground that it was illegally begun. While it acquiesces in the action of the Cambridge aldermen as to its tracks in Cambridge, it cannot set up the illegality of that action as a reason for reversing the order of the Boston aldermen.

Upon the merits of the case it is not necessary to say much. The sole question is whether the public will be served by the proposed running of these cars. The fact that, incidentally, one corporation will gain and another will lose should not affect the decision. The only issue is of public convenience. As we have said before, the exigency to be shown is not such as would justify the exercise of the right of eminent domain by taking land without the owner's consent. It is only a question of subjecting to a little different use tracks which

have already been permitted to occupy streets that were long since taken for public use. If this will accommodate any considerable number of persons without causing an overbalance of inconvenience to the public, by crowding the tracks or streets, it should be done. The chance of incidental and uncompensated loss of traffic is a risk taken by all investors in such enterprises. No testimony was given as to the inconvenience to be caused. Evidently it would be insignificant. But, on the other hand, the Cottage Farm passengers, who save more than half a mile each trip by the new arrangement, number yearly, at the lowest computation, tens of thousands. Each passenger is a witness, whose presence in the cars of the Charles River Company tends to show that he is accommodated by them. And other evidence shows that it is a substantial accommodation, building up the ward where the new tracks are located, even without the full advantages expected.

The Green Street route saves something by bringing facilities nearer to the people and by increasing those facilities. And there is nothing to offset the benefits afforded by these new routes. The demand of the body of the people in Cambridge, shown by the petition of 6,000 citizens, the testimony of leading men and the action of its government, is evidence that there is a public demand for the new and increased facilities. The action of the aldermen of Boston, while it is liable to be reviewed by this Board, is of itself strong testimony that the trifling inconvenience will be overbalanced by the benefit to the travelling public. Great weight should be given to their judgment, especially on a matter peculiarly within their province — the convenient use of the streets in their charge. We have heard nothing to control their opinion that no such inconvenience will arise from the additional use of Boston streets as will overbalance the increased accommodation to persons wishing to travel between the two cities.

So far as this is a revision of decisions given heretofore by this Board, it is a revision expressly provided for by law, and called for by new facts, especially by the construction of two tracks in Cambridge, which did not then exist. The same general principles which led this Board to sustain the appeal of the Charles River Company demand that this appeal be dismissed.

For the Board,

THOMAS RUSSELL, *Chairman.*

MAY 18, 1885.

PROVIDENCE & WORCESTER RAILROAD COMPANY, PETITIONER FOR LEAVE TO CROSS THE BOSTON & ALBANY TRACKS WITH PASSENGER TRAINS.

The Providence & Worcester Railroad Company asks this Board to decree that it “may connect its cars and run over the tracks of the Boston & Albany Railroad for passenger cars at grade where it now has a right to run cars for freight purposes,” at Worcester, under former decrees of the Board, dated May 8 and Aug. 12, 1873, “or cause the Boston & Albany Railroad Company to restore the switches as originally located.”

1. The switches were moved (after a collision) 972 feet eastward of their former location, to promote the convenience and safety of the travelling public. No order can be passed upon this matter, and no recommendation is made, because the action of the Boston & Albany managers in this respect was wise and such as their duty to the public required.

2. The legal rights of the parties must be settled by the courts. The question whether the petitioners now have a legal right to cross the respondent's tracks is not before us, and is not for the Board to decide. We decline to grant the petition upon the sole ground that the Board has no jurisdiction. And this is set forth distinctly in the formal decision of the Board, so that its findings on this question of law may be reviewed, if desired, by the Supreme Judicial Court, without any complication as to findings upon questions of fact.

For the Board,

THOMAS RUSSELL, *Chairman*.

JUNE 30, 1884.

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PETITION OF H. F. MILLS AND OTHERS FOR DISCONTINUANCE OF THE WHISTLING OF LOCOMOTIVES AS CROSSING SIGNALS IN LAWRENCE.

On the petition of H. F. Mills and others of Lawrence for the prevention or regulation of whistling by the locomotives of the Boston & Maine Railroad and the Boston & Lowell Railroad within 5,000 feet from the intersection of the roads of said corporations with Parker Street, a hearing was held at Lawrence, after due notice, on June 29.

Several citizens were heard in support of the petition, which was not opposed by the representatives of the two railroad corporations



who were present ; and nothing was said in opposition, except that a prominent citizen of North Andover very properly asked that no order should be passed which would prevent the warning signal being given at a dangerous crossing in that town near the Lawrence line. No such order has been passed, and that warning will continue to be given.

The petition was intended to cover two matters : (1) an order under chapter 334 of the acts of 1885, as to whistling at street crossings ; (2) a recommendation under the general power of this Board on such matters, in regard to whistling, as a railroad signal calling for switches and the like.

1. The act of this year was founded on the petition of various citizens, but it is in pursuance of a policy strongly advocated by our predecessors on this Board. They have heretofore raised the question whether the use of the whistle as a danger signal has not done more harm than good, the accidents that it saves being, perhaps, overbalanced by the accidents which it causes, by the frightening of horses and by the deaths resulting from the loss of sleep in cases of illness. They also suggest that the value of the whistle as a distinct signal of danger in an emergency has been greatly diminished by its free and almost indiscriminate use. It is to be observed, also, that the suffering and loss arising from the use of the whistle fall upon the innocent ; while, in other cases, the penalty falls upon those who are negligent, or upon those who are occupying railroad tracks as a highway in violation of law. The legislature has thought that while, in unfrequented neighborhoods, the use of the whistle at crossings is attended with little damage, and while at certain peculiarly dangerous places it may be necessary, yet at ordinary crossings in compact neighborhoods it may be forbidden with a balance of advantage to the public.

This has been well tested by experience. As long ago as 1875 the Board say : " The Boston & Albany corporation has, at the request of the residents along its road, discontinued the use of the whistle, except a danger signal, for nearly two years, without experiencing any evil consequences. Those dwelling on the line of that road expressed themselves in the hearing as satisfied, and the number of accidents has not been increased. Its officers also speak of the experiment, without the use of automatic signals, as an established success." The practice continues on this road with like good results ; and a similar system prevails upon some other roads.

Railroad managers seem generally to concur in this view. They state that much of the whistling now practised is not from actual necessity, but from a supposed legal exigency in order to avoid unjust lawsuits. The bill received attention from counsel representing sev-

eral railroad companies, and was finally passed with the acquiescence of all.

The Board have therefore granted the petition. And the formal orders required by law have been given to the corporations.

2. Upon the other matter of signals given by locomotive whistling from one employee to another, the Board can pass no order. But we concur with the opinion strongly expressed by our predecessors on the commission that much of such whistling is needless, that it is an inexcusable annoyance to the public, an infringement on their rights, and in many cases an indictable nuisance. Therefore we strongly recommend to both the corporations to discontinue it in the territory covered by the petition. We have no doubt, from the experience of many railroad managers, that this can be done without unreasonable cost or trouble and without hindrance to traffic. And the Commissioners are confident that both the corporations will willingly comply with this recommendation.

For the Board,

THOMAS RUSSELL, *Chairman.*

JULY 17, 1885.

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CHARLES RIVER STREET RAILWAY COMPANY v. CAMBRIDGE RAILROAD COMPANY.

The petitioners complain that their cars are purposely obstructed and delayed in running by the respondents in operating their road. Section 16 of chapter 112, which is expressly made to apply to street railways, provides that when the Board deems that a change in the mode of operating a road is reasonable and expedient, to promote the convenience and accommodation of the public, it shall inform the corporation of the changes which seem to be proper. No question is before us as to the relative rights of the rival roads, except so far as they concern the travelling public.

The Cambridge road has a right to increase the number of its cars (with municipal approval), and this is not unlawful, even if one motive is to prevent a rival from doing a profitable business. The result of such rivalry is increased accommodation to the public, and this is one object in granting new franchises to competitors. It has no right so to run its cars as to delay unreasonably the traffic of the other road, and thus to annoy its passengers. But to make this a subject of complaint, it should be proved that it is done intentionally and as part of a system. Each case may be apparently trivial, but they



must be such and so numerous as to show a general intent before we can be called on to interfere. An occasional and unauthorized act of an over-zealous driver or conductor, especially if he is acting on a mutual challenge between him and his rival, is not a fit subject for such a complaint. Still less are the casual and unavoidable detentions of the cars of one company by those of another proper subjects for a hearing ; nor a former practice which is now discontinued.

Acting with these views, we see no reason for any formal recommendation. But we would suggest to the managers of each road that they give such clear, and, if necessary, such repeated, directions to all in their employ that they shall understand that the cars of the other company are not to be obstructed or delayed in their passage over the tracks. And we would further suggest that it is a duty which both companies owe to the public to agree upon a time-table for the different portions of their route, so that hindrances to free travel may be obviated, and that the public may be better accommodated.

For the Board,

THOMAS RUSSELL, *Chairman.*

OCT. 7, 1885.

## [I.]

FITCHBURG RAILROAD COMPANY *v.* MANAGER OF TROY  
& GREENFIELD RAILROAD.

This is a request that the Board will annul an order of Manager Locke, dated June 30, 1885, and directing that eastward bound trains shall no longer be switched into "station order" at North Adams yard. Authority for such an order is given by chapter 230 of 1881, and an appeal to the Board by either of the operating companies seems to be given by section 2 of the same act. By the first section the manager of the road "is authorized to make and enforce all needful rules for the operation thereof, *including the operation of the yard at North Adams. . . . And he shall have the power to operate said yard, including the shifting of cars therein,* and to hire men and locomotive power therefor, and in case of necessity he may use the locomotive power of any operating railroad company therefor." The original bill, excepting section 3, was drawn by the late president of the Fitchburg Railroad Company, because it was supposed to be necessary that a yard which was used by more than one operating road, and which might be used by the locomotives of many roads, needed for safety, convenience, and for justice to each company, the control of an impartial manager, with appeal to an independent board.

The first question is whether the Act of 1881, as applied to the contract of August 1880, is unconstitutional, as conflicting with the clause of the United States Constitution forbidding any law impairing the obligation of contracts. But counsel for the Fitchburg Railroad Company assumed for the purpose of this hearing that the law is constitutional [protesting that it was not constitutional, but reserving the question for a court that could decide it]. This makes it needless and improper to argue that question. The Board believes the law to be valid, and follows the counsel on both sides by assuming it to be so, without argument.

The operation of a contract may be changed by a law not impairing its obligation. Familiar instances of this are found in the laws requiring various safety appliances on railroad trains. Each of these

laws affects the operation of contracts between lessors and lessees of railroads. New laws may impose new and onerous duties upon contracting parties, but no one doubts that they may apply to existing contracts.

In this case the contract provides that the number of miles run by the Fitchburg Railroad Company over the Troy & Greenfield Railroad shall be the basis of certain charges. These provisions of the contract remain in full force. The number of miles so run will be diminished by the manager's order, but this does not affect the obligation created by the contract to pay for the miles that are actually run.

*Prima facie* the order of the manager is to be regarded as proper. Strong proof should be given of its impropriety, before we can be called on to annul it, and to take upon ourselves to that extent the practical operation of the State railroad.

The strongest objection to such an order would be (1) that it was beyond the scope of the power intended to be given, or (2) that it was unfair in its working. But this is directly within the scope of the power granted. For it is only the partial exercise of an authority fully and clearly given. Under this order the Fitchburg Railroad Company is forbidden to do certain work in shifting cars within the yard. But the first section of the Act expressly authorizes the manager to forbid any operating road to do any shifting of cars there. It empowers him to do all the shifting, and for that purpose even to use the locomotive power of any operating road. And this, we repeat, is admitted, for the purpose of this hearing, to be a constitutional grant of power. Clearly it is within the scope of his authority for the manager to do in part that which he is expressly authorized to do in the whole.

This is a full answer to the objection that it is inconsistent to contract with a company to "operate" a road, and then to exclude it from operating a portion of its yard. And this objection is also met by the fact that this road is not "operated" by the Fitchburg Railroad Company in the sense in which a lessee usually operates a leased road. The State road is operated by other companies than the Fitchburg Railroad Company. It is also subject to use by an indefinite number of other roads. And the governor and counsel were twice forbidden to exclude other roads from such use in any contract that they might make. Chap. 261, 1880, § § 2 and 4. And therefore the counsel for the Fitchburg Railroad Company frankly and very properly admitted, that, in the ordinary sense, that company does not "operate" the State road.

2. No manifest injustice appears to result from the order of the manager. It is designed, and it was one design of the Act under which it is made, to prevent injustice on the part of the railroad

company. One source of injustice was pointed out by President Stearns when the first award was made. And at his suggestion a part of the switching mileage was excluded from the award and made the subject of a distinct settlement with the State, involving the payment of a large sum.

As to the switching, such as is claimed and allowed under the award of this year, he never asked an allowance for the whole, but for the part equitably belonging to his road, as ascertained by a careful computation and estimate. He did not claim that the switching of cars for delivery at various points on a line of 143 miles could all be equitably charged to the 37 miles which he operated for the State. This year that amount was claimed. And the Board felt bound to allow it, under the letter of the contract, without regard to equity. But if the manager acting under a constitutional law can so change the operation of the road under the contract as to avoid this inequitable result, it is no reason for annulling this order that it will prevent injustice. The saving of undue expense to the State is not an unlawful motive; and the order is not to be set aside because this is one of his motives.

The Board therefore declines to annul the order of the manager.

By the Board,

THOMAS RUSSELL, *Chairman*.

Oct. 7, 1885.

## [J.]

## ORDER FIXING RATES ON THE HOUSATONIC RAILROAD.

COMMONWEALTH OF MASSACHUSETTS.

IN BOARD OF RAILROAD COMMISSIONERS, July 25, 1885.

*Ordered*, under the provisions of chap. 338 of the Acts of 1885, after due notice given to the Housatonic Railroad Company, and acknowledged by said company, and after a hearing, at which the president and attorney of said company attended, —

(1) That the following rates are fixed for coal transported on the roads operated by said company between points in Massachusetts, viz. :

From Pittsfield to Dewey's Station, . . .	40 cents per ton.
" " " Lenox Furnace, . . .	60 " " "
" " " Lee, . . .	60 " " "
" " " South Lee, . . .	60 " " "
" " " Stockbridge, . . .	65 " " "
" " " Glendale, . . .	65 " " "
" " " Housatonic, . . .	70 " " "
" " " Van Deusenville, . . .	70 " " "
" " " Great Barrington, . . .	75 " " "
" " " Sheffield, . . .	80 " " "
" " " Ashley Falls, . . .	80 " " "
From West Stockbridge to Stockbridge, . . .	60 " " "
" " " " Glendale, . . .	60 " " "
" " " " Housatonic, . . .	60 " " "
" " " " Van Deusenville, . . .	60 " " "
" " " " Great Barrington, . . .	60 " " "
" " " " Sheffield, . . .	65 " " "
" " " " Ashley Falls, . . .	70 " " "

(2) And the following maximum charges and rates are fixed for transportation and delivery of coal by said company between the following-named points and places, viz. : —

BET

From Canaan to Ashley Falls, . . .	40 cents per ton.
" " " Sheffield, . . .	45 " " "
" " " Great Barrington, . . .	60 " " "
" " " Van Deusenville, . . .	60 " " "
" " " Housatonic, . . .	65 " " "
" " " Glendale, . . .	65 " " "



From Canaan to Stockbridge, . . . .	65	cents per ton.
“ “ “ West Stockbridge, . . . .	70	“ “ “
“ “ “ South Lee, . . . .	70	“ “ “
“ “ “ Lee, . . . .	75	“ “ “
“ “ “ Lenox Furnace, . . . .	75	“ “ “
“ “ “ Dewey’s Station, . . . .	80	“ “ “
“ “ “ Pittsfield, . . . .	85	“ “ “

Said charges and rates are for cargo lots of not less than forty tons each, and twenty per cent. may be added for car-load lots of less than forty tons. The word “ tons ” meaning long tons, of 2,240 pounds each.

(3) And the following rates are fixed for freight transported by said company between designated points in Massachusetts for the articles named, as follows :—

Jute butts in bales, bagging in bales, canvas in bales and bundles, rags in bales and sacks, wood pulp in bales, waste paper in bales and sacks, bleaching powder in casks, soda ash in casks, oil in barrels, alum in barrels, twine in balls or coils, belting in rolls, iron pipe and fittings, iron and nails, canvas felts and feltings, — four cents per hundred pounds, from Pittsfield to Dewey’s Station, Lenox Furnace, Lee, South Lee, Stockbridge, Glendale, Housatonic, Van Deusenville, Great Barrington, Sheffield and Ashley Falls.

And the following rates from the following-named points to Pittsfield ; viz., from Ashley Falls, Sheffield, Great Barrington, Van Deusenville, Housatonic, Glendale, Stockbridge, South Lee, Lee, Lenox Furnace and Dewey’s Station, for all paper, in whatever form, four cents per hundred pounds.

And the following maximum rates and charges are fixed for the transportation and delivery of the articles named between the following-named points ; viz., from Bridgeport to Ashley Falls, Sheffield, Great Barrington, Van Deusenville, Housatonic, Glendale, Stockbridge, South Lee, Lee, Lenox Furnace, Dewey’s Station and Pittsfield, — jute butts in bales, bagging in bales, canvas in bales and bundles, rags in bales and sacks, wood pulp in bales, waste paper in bales and sacks, bleaching powder in casks, soda ash in casks, oil in barrels, alum in barrels, twine in balls or coils, belting in rolls, iron pipe and fittings, iron and nails, canvas felts and feltings, — ten cents per hundred pounds.

And for all kinds of paper, in whatever form of package, from Pittsfield, Lenox Furnace, Lee, South Lee, Stockbridge, Glendale, Housatonic, Van Deusenville, Great Barrington, Sheffield and Ashley Falls, to Bridgeport, — ten cents per hundred pounds.

All the above orders to take effect on and after Aug. 8, 1885.

[K.]

## CIRCULARS.

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF RAILROAD COMMISSIONERS,

No. 20 BEACON STREET,

BOSTON, Jan. 12, 1885.

*To the President of the ——— Railroad Company:*

Your attention is called to the law providing for the testing of locomotive boilers, approved March 16, 1882, and to the regulations adopted and published by the Board under that law, April 15, 1882, especially to clause five of those regulations.

No report in conformity with that clause has been received from any officer of your company for more than a year.

Per order of the Board,

WM. A. CRAFTS, *Clerk.*

[CHAP. 73.]

### AN ACT to Provide for the Testing of Locomotive Boilers.

*Be it enacted, etc., as follows:*

SECTION 1. The board of railroad commissioners shall as soon as may be adopt, publish and communicate, to every corporation or person operating a railroad, or any portion of a railroad in this Commonwealth, regulations for testing the boilers of locomotives.

SECT. 2. After three months from the publication of said regulations, any corporation or person using on a railroad in this Commonwealth a locomotive the boiler of which has not been tested as provided by said regulations shall be liable to a penalty of twenty dollars for every day of such use, to be recovered for the use of the Commonwealth by fine imposed on complaint before any court or magistrate of competent jurisdiction.

SECT. 3. Said board may from time to time revise said regulations, and when such revision has been communicated to any corporation or person operating a railroad or portion of a railroad in this Commonwealth it shall have the same effect as to such person or corporation as if originally adopted by said board.

SECT. 4. Nothing in this act shall be construed to authorize the appointment by the board of any person to test locomotive boilers. All the testing

of such boilers under the regulations of said board shall when possible be done by the master mechanic of the corporation, firm or person constructing or repairing such boilers, or using them on a railroad in this Commonwealth. [*Approved March 16, 1882.*]

### REGULATIONS FOR THE INSPECTION AND TEST OF LOCOMOTIVE BOILERS.

[Adopted and published by the Board of Railroad Commissioners under the provisions of chapter 73 of the Acts of 1882.]

1. All boilers for locomotives before going into service must be subjected to a hydraulic pressure of 150 pounds per square inch.

2. The water must be heated to near the boiling point.

3. This test must be repeated at least once a year.

4. The superintendent of motive power, master mechanic, or other proper agent of the company, will attend in person. He will remain outside while an assistant will examine the fire-box from the inside.

5. A record of all tests will be made, giving dates and anything worthy of mention, and communicated to the Board.

6. Special examinations of the stay-bolts of locomotives in service should be made not less frequently than once in three months.

7. When these examinations are made, all the water must be drawn from the boiler, so that the vibration of the sheet may indicate any unsoundness of the stay-bolt when it is struck with the hammer.

The Board urgently recommends, in addition to these regulations, that the four upper rows of stay-bolts shall be drilled from the outside three-fourths of an inch in depth and three-sixteenths of an inch in diameter.

WM. A. CRAFTS, *Clerk.*

BOSTON, April 15, 1882.

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#### COMMONWEALTH OF MASSACHUSETTS.

BOARD OF RAILROAD COMMISSIONERS,  
NO. 20 BEACON STREET,

BOSTON, Oct. 31, 1885.

*To the Managers of the several Railroads of Massachusetts :*

The Board desire to learn how many new freight couplers, and of what kind, have been placed upon the cars of your road since the law of 1884 went into effect. Please state, at as early a day as possible, how many of each kind have been so placed between March 1, 1885, and this date.

The Board would also be glad to receive any statement as to the working of such couplers.

Per order,

WM. A. CRAFTS, *Clerk.*

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF RAILROAD COMMISSIONERS,

NO. 20 BEACON STREET,

BOSTON, Dec. 28, 1885.

FREIGHT RATES FOR THE TRANSPORTATION OF LIVE STOCK AND  
ESPECIALLY YOUNG ANIMALS.

Informal complaint is received that the recommendations of the Board, made Feb. 27, 1885, as to rates for the transportation of animals, and especially of young animals designed for the improvement of stock, have not had full effect.

The Board, therefore, desire to learn what your freight rates are for such animals, and what change, if any, has been made since the last named date.

We also desire to know what through rates can be furnished by you to important points beyond the lines of this State.

An early reply is requested, as petitioners propose to call upon the General Court for action, and the Board desire materials for a full report.

Per order,

WM. A. CRAFTS, *Clerk.*

## [L.]

## EXPENSES OF OFFICE

FOR THE YEAR ENDING DEC. 31, 1885.

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Rent of office, . . . . .	\$2,500 00
Messenger and care of office, . . . . .	500 00
Printing blanks and circulars, and binding, . . . . .	250 00
Paper, envelopes, and other stationery, . . . . .	154 05
Postage and expressage, . . . . .	145 25
Employment of experts, . . . . .	153 25
Advertising and other expenses of hearings, . . . . .	88 31
Books, railroad periodicals and newspapers, . . . . .	84 69
Carpet and furniture, . . . . .	58 68
Copying, . . . . .	52 35
Telephone and telegrams, . . . . .	37 27
Law reports and digests, . . . . .	18 75
Draping building (death of U. S. Grant), . . . . .	30 00
Ice, fuel, and watering street, . . . . .	43 45
Cyclostyle, . . . . .	12 00
Incidentals, . . . . .	23 19
	<hr/>
	\$4,151 24

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## BOARD OF RAILROAD COMMISSIONERS.

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THOMAS RUSSELL, Boston, <i>Chairman</i> , . . . . .	Term expires July, 1888
EVERETT A. STEVENS, Boston, . . . . .	“ “ July, 1886
EDWARD W. KINSLEY, Boston, . . . . .	“ “ July, 1887

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Clerk — WILLIAM A. CRAFTS, Boston.

Accountant — FRED E. JONES, Boston.





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TABULATED STATEMENT

OF

RAILWAY AND RAILROAD  
RETURNS.

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Total Permanent Investments, . . . . .	12	164
Total Property and Assets, . . . . .	13	164

#### PROPERTY ACCOUNTS: ADDITIONS AND REDUCTIONS DURING THE YEAR.

Construction, . . . . .	14	166
Equipment, . . . . .	15	166
Other Property, . . . . .	16	166
Total Additions, . . . . .	17	166
Reductions, . . . . .	18	166
Net Additions, . . . . .	19	166

#### REVENUE FOR THE YEAR.

Passengers, . . . . .	20	168
Rents, . . . . .	21	168
Mail and Express, . . . . .	22	168
Sales of Manure, . . . . .	23	168
Other Sources, . . . . .	24	168
Total Income, . . . . .	25	168

## EXPENSES FOR THE YEAR.

	Column.	Page.
Repairs of Road-Bed and Track, . . . . .	26	170
Repairs of Equipment, . . . . .	27	170
Repairs of Buildings, . . . . .	28	170
Renewal of Horses, . . . . .	29	170
Salaries, etc., General Office, . . . . .	30	170
Wages, etc., Employés, . . . . .	31	170
Provender, . . . . .	32	170
Taxes, . . . . .	33	172
Rents, . . . . .	34	172
Insurance, . . . . .	35	172
Injuries to Persons and Property, . . . . .	36	172
Other Expenses, . . . . .	37	172
Total Expenses, . . . . .	38	172
Percentage Expenses to Earnings, . . . . .	39	172

## NET INCOME, INTEREST, DIVIDENDS, ETC.

Net Income, . . . . .	40	174
Interest accrued, . . . . .	41	174
Dividends declared, . . . . .	42	174
Per cent., . . . . .	43	174
Balance for the Year, . . . . .	44	174
Surplus last Year, . . . . .	45	174
Surplus Sept. 30, 1885, . . . . .	46	174

## EQUIPMENT.

Cars, . . . . .	47	176
Other Vehicles, . . . . .	48	176
Horses, . . . . .	49	176
Harnesses, . . . . .	50	176

## LENGTH OF ROAD.

Main Line, . . . . .	51	176
Sidings, . . . . .	52	176
Total Length, . . . . .	53	176

## MILEAGE, ETC.

Miles run, . . . . .	54	178
Passengers carried, . . . . .	55	178
Round Trips, . . . . .	56	178
Average No. of Passengers per Round Trip, . . . . .	57	178
Persons employed, . . . . .	58	178

## ACCIDENTS.

Fatal, . . . . .	59	178
Injured, . . . . .	60	178

## PER MILE OF ROAD OWNED.

	Column.	Page.
Capital Stock paid in, . . . . .	61	180
Net Debt, . . . . .	62	180
Cost of Construction, . . . . .	63	180

## PER MILE OF ROAD OPERATED.

Cost of Equipment, . . . . .	64	180
Repairs of Road-Bed and Track, . . . . .	65	180
Repairs of Equipment, . . . . .	66	180
Renewals of Horses, . . . . .	67	180

## GROSS INCOME.

Per Mile operated, . . . . .	68	182
Per Round Trip, . . . . .	69	182
Per Mile run, . . . . .	70	182
Per Passenger carried, . . . . .	71	182

## EXPENSES.

Per Mile operated, . . . . .	72	182
Per Round Trip, . . . . .	73	182
Per Mile run, . . . . .	74	184
Per Passenger carried, . . . . .	75	184

## NET INCOME.

Per Mile operated, . . . . .	76	184
Per Round Trip, . . . . .	77	184
Per Mile run, . . . . .	78	184
Per Passenger carried, . . . . .	79	184

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STEAM RAILROADS.

## LENGTH OF ROAD AND BRANCHES.

Main Line, . . . . .	1	188
Main Line in Massachusetts, . . . . .	2	188
Double Track in Massachusetts, . . . . .	3	188
Double Track out of Massachusetts, . . . . .	4	188
Sidings in Massachusetts, . . . . .	5	188
Sidings out of Massachusetts, . . . . .	6	188
Total Length computed as Single Track, . . . . .	7	188

## REPORTS.

Ashburnham, . . . . .	15	200
Attleborough Branch, . . . . .	37	219
Berkshire, . . . . .	38	219
Boston & Albany, . . . . .	8	196



## REPORTS.

	Column.	Page.
Boston, Barre & Gardner, . . . . .	16	200
Boston & Lowell, . . . . .	10	196
Boston & Maine, . . . . .	11	196
Boston & Providence, . . . . .	12	200
Boston, Revere Beach & Lynn, . . . . .	32	216
Boston, Winthrop & Shore, . . . . .	17	204
Central Massachusetts, . . . . .	62	224
Chelsea Beach, . . . . .	63	224
Cheshire, . . . . .	18	204
Connecticut River, . . . . .	19	204
Danvers, . . . . .	64	224
Dorchester & Milton, . . . . .	65	224
Eastern, . . . . .	39	219
Fall River, . . . . .	40	219
Fall River, Warren & Providence, . . . . .	20	204
Fitchburg, . . . . .	9	196
Grafton Centre, . . . . .	33	216
Hanover Branch, . . . . .	21	204
Holyoke & Westfield, . . . . .	41	219
Horn Pond Branch, . . . . .	66	224
Housatonic of Connecticut,* . . . . .	22	208
Lancaster, . . . . .	67	225
Lowell & Andover, . . . . .	42	220
Lowell & Framingham, . . . . .	43	220
Martha's Vineyard, . . . . .	34	216
Milford, Franklin & Providence, . . . . .	44	220
Milford & Woonsocket, . . . . .	23	208
Monadnock, . . . . .	45	220
Nantasket Beach, . . . . .	24	208
Nantucket, . . . . .	35	216
Nashua & Lowell, . . . . .	46	221
Nashua, Acton & Boston, . . . . .	47	221
Newburyport, . . . . .	68	225
Newburyport City, . . . . .	48	221
New Haven & Northampton, . . . . .	25	208
New London Northern, . . . . .	26	208
New York & Boston Inland, . . . . .	69	225
New York & New England, . . . . .	13	200
New York, New Haven & Hartford, . . . . .	27	212
North Brookfield, . . . . .	49	221
Norwich & Worcester, . . . . .	28	212
Ocean Terminal, . . . . .	70	225
Old Colony, . . . . .	14	200
Pittsfield & North Adams, . . . . .	50	221
Providence & Worcester, . . . . .	29	212
Providence, Webster & Springfield, . . . . .	52	222

\* Operating the Berkshire, Stockbridge &amp; Pittsfield and West Stockbridge Railroads.

## REPORTS.

	Column.	Page.
Rhode Island & Massachusetts, . . . . .	51	222
Spencer, . . . . .	53	222
Springfield & New London, . . . . .	54	222
Stockbridge & Pittsfield, . . . . .	55	222
Stony Brook, . . . . .	56	223
Troy & Greenfield,* . . . . .	61	224
Union Freight, . . . . .	30	212
Vermont & Massachusetts, . . . . .	57	223
Ware River, . . . . .	58	223
West Amesbury Branch, . . . . .	59	223
West Stockbridge, . . . . .	60	223
Worcester, Nashua & Rochester, . . . . .	31	212
Worcester & Shrewsbury, . . . . .	36	216

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 TABULATED COMPARATIVE RESULTS.

## STOCK, DEBT AND COST PER MILE OF ROAD OWNED.

Stock paid in, . . . . .	71	228
Net Debt, . . . . .	72	228
Total Stock and Net Debt, . . . . .	73	228
Construction, . . . . .	74	228
Equipment, . . . . .	75	228
Total Permanent Investments, . . . . .	76	228

## EARNINGS AND EXPENSES PER MILE OF ROAD OPERATED.

Total Transportation Earnings, . . . . .	77	229
Operating Expenses, . . . . .	78	229
Net Earnings, . . . . .	79	229

## EARNINGS AND EXPENSES PER TOTAL REVENUE TRAIN MILE.

Total Transportation Earnings, . . . . .	80	229
Operating Expenses, . . . . .	81	229
Net Earnings, . . . . .	82	229

## EXPENSES PER TOTAL TRAIN MILE.

Repairs of Road, . . . . .	83	230
New Rails, . . . . .	84	230
Repairs of Bridges, . . . . .	85	230
Repairs of Locomotives, . . . . .	86	230
Fuel, . . . . .	87	230
Oil and Waste, . . . . .	88	230
Repairs of Passenger, Baggage and Mail Cars, . . . . .	89	230
Repairs of Freight Cars, . . . . .	90	230

\* Makes special report to the Legislature.

## REPAIRS.

	Column.	Page.
Per Locomotive, . . . . .	91	231
Per Passenger, Baggage and Mail Car, . . . .	92	231
Per Freight Car, . . . . .	93	231

## AVERAGES, ETC.

Per Passenger; Average Distance travelled, . .	94	231
Per Ton of Freight; Average Distance carried, . .	95	231
Average No. of Passengers per Train Mile, . .	96	231
Average No. of Tons of Freight per Train Mile, . .	97	231

## EARNINGS, EXPENSES, NET EARNINGS, ETC.

Passenger Earnings, . . . . .	98	232
Freight Earnings, . . . . .	99	232
Total Transportation Earnings, . . . . .	100	232
Operating Expenses, . . . . .	101	232
Net Earnings, . . . . .	102	232
Per cent. Operating Expenses to Transportation Earnings, . . . . .	103	232

## ABSTRACT OF STREET RAILWAY RETURNS.

STREET RAILWAYS.		CAPITAL STOCK, DEBT, ETC.						
		1.—Capital Stock paid in.	2.—Num-ber of Stock-holders.	3.—Funded Debt.	4.—Unfunded Debt.	5.—Gross Debt.	6.—Cash and Cash Assets.	7.—Net Debt.
1	Acushnet, . . . . .	\$100,000 00	48	-	\$5,944 51	\$5,944 51	\$2,260 91	\$3,683 60
2	Albany Street Freight, . . . . .	50,000 00	8	-	-	-	1,059 19	-
3	Arlington, . . . . .	13,600 00	26	-	-	-	-	-
4	Brockton, . . . . .	150,000 00	75	\$50,000 00	10,000 00	60,000 00	6,990 98	53,009 02
5	Black Rocks & Salisbury B'h,	9,000 00	7	-	81 98	81 98	1,967 37	-
6	Boston & Chelsea, . . . . .	121,000 00	93	-	-	-	-	-
7	Cambridge, . . . . .	1,600,000 00	795	600,000 00	51,465 63	651,465 63	74,080 52	577,385 11
8	Charles River, . . . . .	250,000 00	155	150,000 00	68,205 57	218,205 57	21,730 21	196,475 33
9	Globe, . . . . .	200,000 00	87	-	32,356 26	32,356 26	12,428 53	19,927 73
10	Haverhill & Groveland, . . . . .	32,000 00	28	-	4,500 00	4,500 00	2,101 50	2,398 50
11	Highland, . . . . .	750,000 00	347	425,000 00	206,520 99	631,520 99	77,404 29	554,116 70
12	Holyoke, . . . . .	25,000 00	47	-	-	-	625 87	-
13	Lowell, . . . . .	100,000 00	102	-	9,203 00	9,203 00	21,371 56	-
14	Lynn & Boston, . . . . .	300,000 00	120	325,000 00	48,345 15	373,345 15	53,385 34	319,959 81
15	Malden & Melrose, . . . . .	165,500 00	51	-	-	-	-	-
16	Merrimac Valley, . . . . .	50,000 00	43	-	-	-	1,511 32	-
17	Metropolitan, . . . . .	1,500,000 00	1,031	1,180,000 00	591,630 42	1,771,630 42	92,101 14	1,679,529 28

18	Middlesex, . . . . .	800,000 00	479	400,000 00	235,114 56	635,114 56	321,634 01	313,480 55
19	Naumkeag, . . . . .	70,000 00	48	61,300 00	121,982 45	183,282 45	50,522 50	132,759 95
20	Natick & Cohituate, . . . . .	25,000 00	65	-	7,000 00	7,000 00	378 68	6,621 32
21	New Bedford & Fairhaven, . . . . .	135,000 00	133	-	9,937 87	9,937 87	1,598 91	8,338 96
22	Newburyport & Amesbury, . . . . .	60,000 00	28	24,000 00	3,360 00	27,360 00	82 59	27,277 41
23	Northampton, . . . . .	50,000 00	12	-	4,884 00	4,884 00	1 02	4,882 98
24	North Woburn, . . . . .	25,000 00	13	-	4,900 00	4,900 00	339 25	4,560 75
25	Salem, . . . . .	150,000 00	63	-	-	-	227 43	-
26	Salem & Danvers, . . . . .	100,000 00	83	-	6,398 08	6,398 08	7,842 53	-
27	Somerville, . . . . .	153,000 00	118	-	-	-	-	-
28	South Boston, . . . . .	750,000 00	507	200,000 00	10,500 00	210,500 00	54,204 83	156,295 17
29	Springfield, . . . . .	150,000 00	61	-	5,117 12	5,117 12	7,976 05	-
30	Stoneham, . . . . .	33,000 00	16	-	-	-	4,573 68	-
31	Taunton, . . . . .	40,000 00	108	-	6,000 00	6,000 00	6,833 63	-
32	Waltham & Newton, . . . . .	30,000 00	88	-	16,400 00	16,400 00	1,801 11	14,598 89
33	Winnisimmet, . . . . .	50,000 00	45	-	138 00	138 00	261 35	-
34	Worcester, . . . . .	40,000 00	7	40,000 00	30,102 42	70,102 42	7,876 53	62,225 89
Total, . . . . .		\$8,077,100 00	4,937	\$3,455,300 00	\$1,490,088 01	\$4,945,388 01	\$835,172 86	\$4,110,215 15



## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

STREET RAILWAYS.		COST OF ROAD, EQUIPMENT, ETC.					13.—Total Property and Assets.
		8.—Road.	9.—Equipment.	10.—Land and Buildings.	11.—Other Property.	12.—Total Permanent Investments.	
1	Acushnet, . . . . .	\$54,476 83	\$32,505 35	\$16,594 62	—	\$103,576 80	\$105,837 71
2	Albany Street Freight, . . . . .	49,066 29	—	—	—	49,066 29	50,125 48
3	Arlington, . . . . .	13,600 00	—	—	—	13,600 00	13,600 00
4	Brockton, . . . . .	160,543 88	40,793 44	16,206 82	—	217,544 14	224,535 12
5	Black Rocks & Salisbury Beach, . . . . .	5,305 34	2,400 00	380 00	—	8,085 34	10,052 71
6	Boston & Chelsea, . . . . .	121,000 00	—	—	—	121,000 00	121,000 00
7	Cambridge, . . . . .	1,102,043 79	498,949 46	613,984 20	—	2,214,977 45	2,289,057 97
8	Charles River, . . . . .	219,266 67	142,842 58	70,568 17	\$1,351 60	434,029 02	455,759 26
9	Globe, . . . . .	145,190 48	51,399 50	37,822 75	—	234,412 73	246,841 26
10	Haverhill & Groveland, . . . . .	21,572 63	12,907 63	7,410 07	1,500 00	43,890 33	45,491 83
11	Highland, . . . . .	408,390 78	433,050 88	418,374 27	66,500 00	1,326,315 93	1,403,720 22
12	Holyoke, . . . . .	14,509 78	11,150 59	—	—	25,660 37	26,286 24
13	Lowell, . . . . .	73,441 45	24,545 71	25,751 94	—	123,739 10	145,110 66
14	Lynn & Boston, . . . . .	407,281 85	160,054 39	113,680 86	—	681,017 10	734,402 44
15	Malden & Melrose, . . . . .	74,719 52	—	—	—	74,719 52	74,719 52
16	Merrimac Valley, . . . . .	20,000 00	8,000 00	30,000 00	—	58,000 00	59,511 32
17	Metropolitan, . . . . .	1,619,560 06	977,906 87	1,140,954 05	175,000 00	3,913,420 98	4,005,522 12

18	Middlesex, . . . . .	608,070 44	254,131 88	277,699 68	-	1,139,902 00	1,461,536 01
19	Naumkeag, . . . . .	41,669 14	78,548 83	18,696 26	85,754 08	224,668 31	275,190 81
20	Natick & Cochuuate, . . . . .	21,550 00	6,950 00	3,500 00	-	32,000 00	32,378 68
21	New Bedford & Fairhaven, . . . . .	96,618 29	43,712 84	32,364 90	-	172,696 03	174,294 94
22	Newburyport & Amesbury, . . . . .	80,761 43	-	10,850 00	-	91,611 43	91,694 02
23	Northampton, . . . . .	46,150 00	6,830 60	4,100 00	-	57,080 60	57,081 62
24	North Woburn, . . . . .	25,550 00	1,950 00	1,500 00	-	29,000 00	29,339 25
25	Salem, . . . . .	203,569 52	-	5,283 84	-	208,853 36	209,080 79
26	Salem & Danvers, . . . . .	59,608 57	32,060 40	14,690 52	-	106,359 49	114,202 02
27	Somerville, . . . . .	153,000 00	-	-	-	153,000 00	153,000 00
28	South Boston, . . . . .	302,738 14	289,814 24	349,755 94	10,000 00	952,308 32	1,006,513 15
29	Springfield, . . . . .	92,290 14	39,518 08	60,196 34	-	192,004 56	199,980 61
30	Stoneham, . . . . .	33,600 00	8,635 50	3,429 83	1,629 00	47,294 33	51,868 01
31	Taunton, . . . . .	24,000 00	14,875 00	8,000 00	-	46,875 00	53,708 63
32	Waltham & Newton, . . . . .	37,493 41	7,744 37	3,448 88	-	48,686 66	50,487 77
33	Winnisimmet, . . . . .	50,000 00	-	-	-	50,000 00	50,261 35
34	Worcester, . . . . .	82,384 94	35,540 28	38,087 38	-	156,012 60	163,889 13
Total, . . . . .		\$3,469,023 37	\$3,216,818 42	\$3,323,331 32	\$341,734 68	\$13,350,907 79	\$14,186,080 65

## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

STREET RAILWAYS.		PROPERTY ACCOUNTS: ADDITIONS AND REDUCTIONS DURING THE YEAR.					
		14.—Construction.	15.—Equipment.	16.—Other Prop-erty.	17.—Total Addi-tions.	18.—Reductions.	19.—Net Additions.
1	Acushnet, . . . .	\$52,699 95	\$32,505 35	\$16,594 62	\$101,799 92	-	\$101,799 92*
2	Albany Street Freight, . . . .	-	-	-	-	-	-
3	Arlington, . . . .	-	-	-	-	-	-
4	Brockton, . . . .	39,786 92	18,820 76	9,306 82	67,914 50	\$5,653 07	62,261 43
5	Black Rocks & Salisbury Beach, . . . .	403 36	200 00	-	603 36	-	603 36
6	Boston & Chelsea, . . . .	-	-	-	-	-	-
7	Cambridge, . . . .	-	5,870 00	-	5,870 00	26,783 60	20,913 60 <i>d</i>
8	Charles River, . . . .	20,552 11	31,887 23	26,722 90	79,162 24	934 25	78,227 99
9	Globe, . . . .	10,928 65	3,502 47	1,497 49	15,928 61	-	15,928 61
10	Haverhill & Groveland, . . . .	1,451 34	3,759 41	3,640 07	8,850 82	30 00	8,820 82
11	Highland, . . . .	5,259 23	23,962 75	30,355 03	59,577 01	-	59,577 01
12	Holyoke, . . . .	5,369 99	4,618 99	-	9,988 98	-	9,988 98
13	Lowell, . . . .	-	-	8,379 12	8,379 12	-	8,379 12
14	Lynn & Boston, . . . .	26,377 71	9,102 43	-	35,480 14	34 31	35,445 83
15	Malden & Melrose, . . . .	-	-	-	-	-	-
16	Merrimac Valley, . . . .	-	-	-	-	6,000 00	6,000 00 <i>d</i>
17	Metropolitan, . . . .	70,118 91	36,074 00	24,906 36	131,099 27	11,100 03	119,999 24

18	Middlesex, . . . . .	36,277 90	27,065 60	27,658 91	91,002 41	480 00	90,522 41
19	Naumkeag, . . . . .	19,607 20	8,464 46	2,901 53	30,973 19	-	30,973 19
20	Natick & Cohituate, . . . . .	21,550 00	6,950 00	3,500 00	32,000 00	-	32,000 00*
21	New Bedford & Fairhaven, . . . . .	3,773 61	3,000 00	-	6,773 61	-	6,773 61
22	Newburyport & Amesbury, . . . . .	-	-	-	-	-	-
23	Northampton, . . . . .	-	1,000 00	-	1,000 00	-	1,000 00
24	North Woburn, . . . . .	-	-	-	-	-	-
25	Salem, . . . . .	-	-	-	-	-	-
26	Salem & Danvers, . . . . .	25,529 54	13,050 49	4,996 22	43,576 25	-	43,576 25
27	Somerville, . . . . .	-	-	-	-	-	-
28	South Boston, . . . . .	-	1,879 24	51,888 00	53,767 24	11,447 50	42,319 74
29	Springfield, . . . . .	705 25	2,603 20	9,170 47	12,478 92	-	12,478 92
30	Stoneham, . . . . .	-	256 80	-	256 80	-	256 80
31	Taunton, . . . . .	-	-	-	-	-	-
32	Waltham & Newton, . . . . .	-	-	-	-	-	-
33	Winnisimmet, . . . . .	-	-	-	-	-	-
34	Worcester, . . . . .	1,973 97	2,931 80	11,008 38	15,914 15	-	15,914 15
	Total, . . . . .	\$312,365 64	\$237,504 98	\$232,525 92	\$812,396 54	\$62,462 76	\$749,933 78

\* Built during the year.

d Reduction.

## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

STREET RAILWAYS.		REVENUE FOR THE YEAR.					25.—Total Income.
		20.—Passengers.	21.—Rents.	22.—Mail and Express.	23.—Sales of Manure.	24.—Other Sources.	
1	Acushnet, . . . . .	\$9,784 95	-	-	-	-	\$9,784 95*
2	Albany Street Freight, . . . . .	†	-	-	-	\$835 00	835 00
3	Arlington, . . . . .	‡	\$816 00	-	-	-	816 00
4	Brockton, . . . . .	55,445 87	-	-	\$360 00	1,604 51	57,410 38§
5	Black Rocks & Salisbury Beach, . . . . .	5,360 19	-	-	-	-	5,360 19
6	Boston & Chelsea, . . . . .		7,260 00	-	-	-	7,260 00
7	Cambridge, . . . . .	602,673 64	7,472 38	-	7,733 03	750 00	618,629 05
8	Charles River, . . . . .	131,917 25	-	-	1,667 01	1,418 92	135,003 18
9	Globe, . . . . .	86,601 62	-	-	958 15	542 25	88,102 02
10	Haverhill & Groveland, . . . . .	17,924 43	-	-	120 00	356 00	18,400 43
11	Hingham, . . . . .	537,466 44	2,082 06	-	2,817 30	2,650 54	545,016 34
12	Holyoke, . . . . .	11,347 18	-	-	141 50	184 10	11,672 78
13	Lowell, . . . . .	70,766 23	-	-	550 00	717 48	72,033 71
14	Lynn & Boston, . . . . .	355,161 49	757 43	-	2,750 80	-	368,669 72
15	Malden & Melrose, . . . . .	¶	-	-	-	-	-
16	Merrimac Valley, . . . . .	42,660 38	-	-	400 00	200 00	43,260 38
17	Metropolitan, . . . . .	1,820,503 34	36,342 55	-	7,318 71	10,315 85	1,874,480 45



18	Middlesex, . . . . .	373,403 30	10,225 18	-	3,401 10	1,140 17	388,169 75
19	Naumkeag, . . . . .	97,565 54	793 83	-	1,129 57	231 50	99,720 46
20	Natick & Cohituate, . . . . .	2,259 90	-	\$37 94	-	58 70	2,556 54**
21	New Bedford & Fairhaven, . . . . .	77,124 81	-	642 50	917 84	-	78,685 15
22	Newburyport & Amesbury, . . . . .	††	4,950 00	-	-	800 00	5,750 00
	Lessee's Account, . . . . .	23,049 80	-	-	300 00	-	23,349 80
23	Northampton, . . . . .	10,599 60	-	175 50	165 00	-	10,940 10
24	North Woburn, . . . . .	3,760 55	-	125 00	40 00	-	3,925 55
25	Salem, . . . . .	††	100 00	-	-	-	100 00
26	Salem & Danvers, . . . . .	32,628 09	-	-	285 54	128 00	33,041 63
27	Somerville, . . . . .	†	9,180 00	-	-	-	9,180 00
28	South Boston, . . . . .	472,686 84	2,743 11	-	1,401 85	1,611 21	478,443 01
29	Springfield, . . . . .	72,752 52	-	-	673 18	1,800 18	75,225 88
30	Stonham, . . . . .	20,523 50	-	187 50	178 50	31 25	20,920 75
31	Taunton, . . . . .	23,307 20	-	-	-	-	23,307 20
32	Waltham & Newton, . . . . .	10,482 90	-	50 00	100 00	-	10,632 90
33	Winnisimmet, . . . . .		3,000 00	-	-	-	3,000 00
34	Worcester, . . . . .	70,124 38	-	-	624 47	205 85	70,954 70
	Total, . . . . .	\$5,047,881 94	\$85,722 56	\$1,218 44	\$34,033 55	\$25,581 51	\$5,194,438 00

\* Commenced operating in July, 1885.

† Used only for freight.

§ Operating 6.05 miles of track; new extension operated Oct. 1, 1885.

|| Leased to and operated by the Middlesex.

\*\* Operated for 63 days.

†† Leased to and operated by the Naumkeag.

‡ Leased to and operated by the Cambridge.

|| Leased to and operated by the Lynn &amp; Boston.

†† Leased to and operated by E. P. Shaw.

## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

	STREET RAILWAYS.	EXPENSES FOR THE YEAR.						32.—Provender.
		26.—Repairs of Road-bed and Track.	27.—Repairs of Equipment.	28.—Repairs of Buildings.	29.—Renewal of Horses.	30.—Salaries, etc., General Office.	31.—Wages, etc., Employés.	
1	Acushnet, . . . . .	—	—	—	—	\$259 00	\$5,389 30	\$2,024 27
2	Albany Street Freight, . . . . .	\$40 09	—	—	—	150 00	—	—
3	Arlington, . . . . .	—	—	—	—	—	—	—
4	Brockton, . . . . .	\$2,412 22	\$2,382 40	\$59 05	—	2,762 11	19,493 28	10,970 65
5	Black Rocks & Salisbury Beach, . . . . .	—	—	—	—	2,800 00	711 66	254 63*
6	Boston & Chelsea, . . . . .	—	—	—	—	—	—	—
7	Cambridge, . . . . .	16,607 75	37,973 38	868 35	\$17,652 10	12,940 00	237,899 36	107,315 57
8	Charles River, . . . . .	462 19	7,757 10	597 78	986 01	2,604 33	64,516 76	28,504 83
9	Globe, . . . . .	2,287 20	7,259 34	720 81	2,837 40	3,832 00	30,625 16	15,892 17
10	Haverhill & Groveland, . . . . .	1,089 70	912 96	196 14	175 00	750 00	4,551 70	2,560 04
11	Highland, . . . . .	14,857 86	38,596 34	2,099 30	16,918 00	16,500 00	221,004 72	90,480 48
12	Holyoke, . . . . .	114 29	619 95	26 22	—	900 00	4,645 65	2,799 06
13	Lowell, . . . . .	8,562 89	5,536 10	1,137 20	3,759 33	3,099 96	23,030 21	10,706 51
14	Lynn & Boston, . . . . .	18,756 57	36,512 01	1,949 67	11,552 87	10,222 40	126,869 28	56,987 77
15	Malden & Melrose, . . . . .	—	—	—	—	—	—	—
16	Merrimac Valley, . . . . .	4,702 23	2,929 12	150 28	1,255 00	1,700 00	13,097 70	7,663 65
17	Metropolitan, . . . . .	65,058 75	169,282 48	17,099 67	72,590 25	25,266 68	777,651 14	305,767 33

18	Middlesex, . . . . .	4,086 52	28,491 71	1,669 08	11,801 00	13,290 00	125,593 71	73,192 07
19	Naumkeag, . . . . .	6,877 65	8,057 70	864 59	4,955 00	4,400 39	25,223 84	15,891 40
20	Natick & Cohituate, . . . . .	130 07	67 59	-	205 00	150 00	416 06	358 22
21	New Bedford & Fairhaven, . . . . .	2,965 23	6,192 51	1,239 55	1,988 00	3,320 08	29,644 97	16,719 14
22	Newburyport & Amesbury, . . . . .	3,798 68	-	-	-	500 00	-	-
	Lessee's account, . . . . .	113 70	854 23	-	-	-	7,494 36	6,642 59
23	Northampton, . . . . .	1,094 14	917 19	-	292 50	1,000 00	2,895 91	2,198 92
24	North Woburn, . . . . .	304 24	198 23	-	590 00	-	1,371 00	731 38
25	Salem, . . . . .	-	-	-	-	-	-	-
26	Salem & Danvers, . . . . .	397 93	1,639 95	9 75	1,140 00	1,911 66	10,602 07	6,555 47
27	Somerville, . . . . .	-	-	-	-	-	-	-
28	South Boston, . . . . .	7,141 06	29,145 41	4,248 59	11,297 50	9,199 92	191,905 95	78,808 43
29	Springfield, . . . . .	2,293 20	5,165 78	618 07	2,298 70	4,200 00	24,303 74	12,868 16
30	Stoneham, . . . . .	1,337 41	2,183 38	332 92	910 00	2,000 00	5,407 85	2,821 31
31	Taunton, . . . . .	1,911 95	2,250 65	-	205 00	1,200 00	6,525 57	5,290 63
32	Waltham & Newton, . . . . .	1,612 20	454 51	-	-	940 00	3,036 25	2,043 17
33	Winnisimmet, . . . . .	-	-	-	-	-	-	-
34	Worcester, . . . . .	2,892 29	4,933 82	535 19	2,048 38	4,611 74	20,176 41	11,522 03
	Total, . . . . .	\$171,908 01	\$400,313 84	\$34,422 21	\$165,457 04	\$130,510 27	\$1,984,113 61	\$877,569 88

\* Coal, wood and water.

## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

		EXPENSES FOR THE YEAR — Concluded.						
STREET RAILWAYS.		33.—Taxes.	34.—Rents.	35.—Insurance.	36.—Injuries to Persons and Property.	37.—Other Expenses.	38.—Total Expenses.	39.—Percentage Expenses to Earnings.
1	Acushnet, . . . .	—	—	\$514 50	—	\$1,704 68	\$9,891 75	—
2	Albany Street Freight, . . . .	\$181 08	—	—	—	572 00	943 17	—
3	Arlington, . . . .	—	—	—	—	—	—	—
4	Brockton, . . . .	1,580 07	—	473 54	\$15 00	2,510 99	42,659 31	75
5	Black Rocks & Salisbury Beach, . . . .	156 01	\$305 00	25 87	—	132 93	4,386 10	—
6	Boston & Chelsea, . . . .	—	—	—	—	—	—	—
7	Cambridge, . . . .	19,117 91	12,126 75	3,682 62	7,586 84	29,865 26	503,635 89	81
8	Charles River, . . . .	4,253 18	6,836 13	846 57	1,253 06	7,392 15	126,040 09	93
9	Globe, . . . .	3,511 50	—	845 45	575 95	5,240 54	73,637 52	84
10	Haverhill & Groveland, . . . .	236 26	—	159 58	1,100 00	1,185 47	12,916 85	70
11	Highland, . . . .	16,010 67	18,400 20	6,018 81	12,738 17	14,384 31	468,008 86	86
12	Holyoke, . . . .	—	—	80 75	75 00	1,125 62	10,386 54	89
13	Lowell, . . . .	1,015 81	—	806 02	50 70	3,541 21	61,245 94	85
14	Lynn & Boston, . . . .	6,434 06	21,383 29	3,120 15	3,797 66	18,302 75	315,888 48	86
15	Malden & Melrose, . . . .	—	—	—	—	—	—	—
16	Merrimac Valley, . . . .	910 96	—	109 98	—	1,206 50	33,725 42	78
17	Metropolitan, . . . .	49,108 11	5,867 51	9,399 50	31,468 94	46,666 76	1,575,237 12	84

18	Middlesex, . . . . .	11,130 58	6,596 75	3,833 16	5,085 94	17,583 93	302,354 45	82
19	Naumkeag, . . . . .	2,655 72	535 83	895 82	1,615 93	5,063 53	77,037 40	77
20	Natick & Cochrutate, . . . . .	-	-	25 0)	-	625 92	1,977 86	84
21	New Bedford & Fairhaven, . . . . .	2,350 35	-	508 50	3,872 87	2,888 52	71,689 72	91
22	Newburyport & Amesbury, . . . . .	303 18	-	134 75	-	814 47	5,551 08	-
	Lessee's account, . . . . .	-	4,950 00	95 75	-	3,315 67	23,466 30	-
23	Northampton, . . . . .	54 59	-	-	-	1,015 09	9,468 34	87
24	North Woburn, . . . . .	50 32	-	24 50	-	254 66	3,524 33	90
25	Salem, . . . . .	-	-	-	-	100 00	100 00	-
26	Salem & Danvers, . . . . .	1,022 71	637 24	377 21	3 00	1,780 63	26,077 62	79
27	Somerville, . . . . .	-	-	-	-	-	-	-
28	South Boston, . . . . .	17,156 56	11,369 98	3,159 00	14,280 12	24,575 73	402,292 25	84
29	Springfield, . . . . .	2,336 68	-	262 00	2,585 00	1,695 13	58,626 46	78
30	Stoneham, . . . . .	257 17	-	183 43	-	682 91	16,116 38	77
31	Taunton, . . . . .	427 25	-	261 55	-	1,322 54	19,395 14	83
32	Waltham & Newton, . . . . .	31 71	-	85 25	-	1,722 06	9,925 15	93
33	Winnimmet, . . . . .	-	-	-	-	-	-	-
34	Worcester, . . . . .	575 93	-	437 25	-	3,731 62	51,464 66	73
	Total, . . . . .	\$140,868 37	\$59,005 68	\$36,356 51	\$86,104 18	\$201,007 58	\$1,317,650 18	83



## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

STREET RAILWAYS.		NET INCOME, INTEREST, DIVIDENDS, ETC.						
		40.—Net In- come.	41.—Interest Accrued.	42.—Dividends Declared.	43.—Per Cent.	44.—Balance for the Year.	45.—Surplus last Year.	46.—Surplus Sept. 30, 1885.
1	Acushnet, . . . . .	\$106 80 <i>d</i>	—	—	—	\$106 80 <i>d</i>	—	\$106 80 <i>d</i>
2	Albany Street Freight, . . . . .	108 17 <i>d</i>	—	—	—	108 17 <i>d</i>	\$233 65	125 48
3	Arlington, . . . . .	816 00	—	\$816 00	6	—	—	—
4	Brockton, . . . . .	14,751 07	—	15,000 00	10	248 93 <i>d</i>	14,784 05*	14,535 12
5	Black Rocks & Salisbury Beach, . . . . .	974 09	—	900 00	10	74 09	900 00	974 09
6	Boston & Chelsea, . . . . .	7,260 00	—	7,260 00	6	—	—	—
7	Cambridge, . . . . .	114,993 16	\$29,162 70	80,000 00	5	5,830 46	31,761 88	37,592 34
8	Charles River, . . . . .	8,963 09	8,963 09	—	—	—	12,446 31+	12,446 31 <i>d</i>
9	Globe, . . . . .	14,474 50	1,176 21	13,000 00	6½	298 29	14,186 71	14,485 00
10	Haverhill & Groveland, . . . . .	5,483 58	—	2,000 00	7½	3,483 58	5,508 25	8,991 83
11	Highland, . . . . .	77,007 48	29,592 24	60,000 00	8	12,584 76 <i>d</i>	34,783 99	22,199 23
12	Holyoke, . . . . .	1,286 24	—	—	—	1,286 24	—	1,286 24
13	Lowell, . . . . .	10,787 77	1 74	5,574 00	6	5,212 03	30,695 63	35,907 66
14	Lynn & Boston, . . . . .	52,781 24	16,571 65	24,000 00	8	12,209 59	48,847 70	61,057 29
15	Malden & Melrose, . . . . .	—	—	—	—	—	—	—
16	Merrimac Valley, . . . . .	9,534 96	300 00	3,000 00	6	6,234 96	3,276 36\$	9,511 32
17	Metropolitan, . . . . .	299,253 33	92,330 67	120,000 00	8	86,922 66	646,969 04	733,891 70

18	Middlesex, . . . . .	85,815 30	36,286 33	62,413 75	††	12,884 78d	39,306 23	26,421 45
19	Naumkeag, . . . . .	22,683 06	6,912 99	15,400 00	22	370 07	21,538 29	21,908 36
20	Natick & Cochituate, . . . . .	378 68	-	-	-	378 68	-	378 68
21	New Bedford & Fairhaven, . . . . .	6,995 43	568 33	5,400 00	4	1,027 10	28,329 97	29,357 07
22	Newburyport & Amesbury, . . . . .	198 92	1,680 00	-	-	1,481 08d	5,815 10	4,334 02
	Lessee's Account, . . . . .	116 50d	-	-	-	116 50d	-	116 50d
23	Northampton, . . . . .	1,471 76	-	-	-	1,471 76	725 86	2,197 62
24	North Woburn, . . . . .	401 22	309 00	-	-	92 22	652 97d	560 75d
25	Salem, . . . . .	-	-	-	-	-	59,080 79	59,080 79
26	Salem & Danvers, . . . . .	6,964 01	-	4,400 00	6**	2,564 01	5,239 93	7,803 94
27	Somerville, . . . . .	9,180 00	-	9,180 00	6	-	-	-
28	South Boston, . . . . .	76,150 76	9,577 68	60,000 00	8	6,573 08	39,440 07	46,013 15
29	Springfield, . . . . .	16,599 42	1,023 75	10,000 00	8††	5,575 67	39,287 82	44,863 49
30	Stoneham, . . . . .	4,804 37	-	3,300 00	10	1,504 37	17,353 64	18,868 01
31	Taunton, . . . . .	3,912 06	257 00	2,400 00	6	1,255 06	6,153 57	7,708 63
32	Waltham & Newton, . . . . .	707 75	-	-	-	707 75	3,380 02	4,087 77
33	Winnisimmet, . . . . .	3,000 00	-	3,000 00	6	-	123 35	123 35
34	Worcester, . . . . .	19,490 04	3,638 10	-	-	15,851 94	37,934 77	53,786 71
	Total, . . . . .	\$876,787 82	\$238,351 48	\$507,043 75	6.3	\$131,392 59	\$1,122,867 39	\$1,254,259 98

\* \$5,653.07 deducted for Depreciation in Equipment.

† 3 per cent. on \$24,000, and 4 per cent. on \$32,000 Capital Stock.

|| \$53,721.30 deducted for Depreciation in Lease Account.

\*\* 4 per cent. on \$60,000, and 2 per cent. on \$100,000 Capital Stock.

†† 7 per cent. for the year, with an extra dividend of 1½ per cent. on \$666,500 of Capital Stock, Feb. 21, 1885.

† \$18,412.40 for expenses during construction charged to construction from Deficit.

‡ \$68,000 deducted for Depreciation in Real Estate and Equipment.

¶ \$37,700 added for Bonds and Notes paid by Naumkeag Street Railway Co.

‡‡ On \$125,000 Capital Stock.

d Deficit.

## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

	STREET RAILWAYS.	EQUIPMENT.				LENGTH OF ROAD.		
		47.—Cars.	48.—Other Vehicles.	49.—Horses.	50.—Harnesses.	51.—Main Line.	52.—Sidings.	53.—Total Length.
1	Acushnet, . . . .	29	1	102	17	4.688	.625	5.313
2	Albany Street Freight, . . . .	—	—	—	—	.856	.076	.932
3	Arlington, . . . .	—	—	—	—	1.576	—	1.57
4	Brockton, . . . .	30	3	141	32	10.566	.783	11.349
5	Black Rocks & Salisbury Beach, . . . .	5	—	†	—	1.694	.095	1.789
6	Boston & Chelsea, . . . .	—	—	—	—	4.116	.038	4.154
7	Cambridge, . . . .	255	19	1,393	430	42.978	.880	43.858
8	Charles River, . . . .	58	—	377	74	10.606	1.581	12.187
9	Globe, . . . .	40	9	160	53	10.045	1.854	11.899
10	Haverhill & Groveland, . . . .	11	3	25	12	4.357	.366	4.723
11	Highland, . . . .	187	10	977	247	18.176	.990	19.166
12	Holyoke, . . . .	8	—	24	6	2.052	.608	2.660
13	Lowell, . . . .	28	7	106	30	5.787	.674	6.461
14	Lynn & Boston, . . . .	150	10	634	189	35.146	2.562	37.708
15	Malden & Melrose, . . . .	—	—	—	—	3.832	.475	4.307
16	Merrimac Valley, . . . .	20	4	67	16	5.800	.900	6.700
17	Metropolitan, . . . .	721	27	3,502	984	77.703	7.335	85.038

18	Middlesex, . . . . .	152	18	639	174	18,598	2,106	20,704
19	Naumkeag, . . . . .	61	39	163	56	6,616	1,614*	8,230
20	Natick & Cochituate, . . . . .	5	7	12	8	3,000	.200	3,200
21	New Bedford & Fairhaven, . . . . .	42	7	140	35	7,400	.620	8,020
22	Newburyport & Amesbury,* . . . . .	12	10	45	20	6,600	.200	6,800
23	Northampton, . . . . .	7	3	26	5	3,200	.030	3,230
24	North Woburn, . . . . .	4	2	5	4	2,690	—	2,690
25	Salem, . . . . .	—	—	—	—	7,785	.763	8,548
26	Salem & Danvers, . . . . .	18	2	92	23	8,800	.450	9,250
27	Somerville, . . . . .	—	—	—	—	4,879	.526	5,405
28	South Boston, . . . . .	193	—	852	300	13,015	.205	13,220
29	Springfield, . . . . .	28	9	115	35	8,170	.190	8,360
30	Stoneham, . . . . .	10	3	28	9	2,680	.050	2,730
31	Taunton, . . . . .	14	3	43	24	4,090	.284	4,374
32	Waltham & Newton, . . . . .	6	5	15	6	3,211	.160	3,371
33	Winnisimmet, . . . . .	—	—	—	—	1,883	.073	1,956
34	Worcester, . . . . .	20	5	102	27	5,530	.470	6,000
	Total, . . . . .	2,114	206	9,785	2,816	348,125	27,783	375,908

\* Lessee's Account.

† One dummy engine.

## ABSTRACT OF STREET RAILWAY RETURNS — Continued.

	STREET RAILWAYS.	MILEAGE, ETC.					ACCIDENTS.	
		54. — Miles run.	55. — Passengers Carried.	56. — Round Trips.	57. — Average No. of Passengers per Round Trip	58. — Persons Employed.	59. — Fatal.	60. — Injured.
1	Acushnet, . . . .	55,301	204,866	12,743	—	26	—	—
2	Albany Street Freight, . .	—	—	—	—	—	—	—
3	Arlington, . . . .	—	—	—	—	—	—	—
4	Brockton, . . . .	151,488	1,016,753	12,511	81	44	1	—
5	Black Rocks & Salisbury B'ch,	5,096	67,000	1,274	—	6	1	—
6	Boston & Chelsea, . . .	—	—	—	—	—	—	—
7	Cambridge, . . . .	2,290,590	12,086,078	285,457	43	517	2	10
8	Charles River, . . . .	635,638	2,657,883	87,469	30	153	2	—
9	Globe, . . . .	321,163	1,702,098	73,718	23	64	—	1
10	Haverhill & Groveland, . .	44,552	292,266	9,500	31	9	—	1
11	Highland, . . . .	1,897,040	11,019,463	275,023	40	375	—	4
12	Holyoke, . . . .	58,954	207,203	14,365	14	9	—	—
13	Lowell, . . . .	229,551	1,393,823	22,955	60	50	—	—
14	Lynn & Boston, . . . .	1,206,647	6,834,456	140,272	49	263	1	19
15	Malden & Melrose, . . .	—	—	—	—	—	—	—
16	Merrimac Valley, . . . .	172,524	682,566	34,514	20	25	1	—
17	Metropolitan, . . . .	6,810,707	37,094,388	1,038,022	35	1,567	7	15



18	Middlesex, . . . . .	1,149,793	7,572,263	167,882	45	295	-	3
19	Naumkag, . . . . .	288,478	1,726,965	34,173	50	65	-	4
20	Natick & Cohituate, . . . . .	4,602	32,149	767	42	6	-	-
21	New Bedford & Fairhaven, . . . . .	338,759	1,580,437	74,494	21	56	-	7
22	Newburyport & Amesbury,* . . . . .	57,442	305,841	5,222	58	15	-	-
23	Northampton, . . . . .	42,560	134,848	6,650	20	7	-	-
24	North Woburn, . . . . .	19,540	85,035	3,632	23	3	-	-
25	Salem, . . . . .	-	-	-	-	-	-	-
26	Salem & Danvers, . . . . .	111,498	455,940	7,918	57	26	-	5
27	Somerville, . . . . .	-	-	-	-	-	-	-
28	South Boston, . . . . .	1,597,342	9,846,728	259,837	38	391	-	8
29	Springfield, . . . . .	268,230	1,416,000	56,469	25	55	-	4
30	Stonham, . . . . .	48,500	236,347	9,700	24	15	-	-
31	Taunton, . . . . .	96,582	470,430	16,627	29	15	-	-
32	Waltham & Newton, . . . . .	28,051	173,269	3,733	46	6	-	-
33	Winnisimmet, . . . . .	-	-	-	-	-	-	-
34	Worcester, . . . . .	211,991	1,451,691	43,411	33	40	-	-
	Total, . . . . .	18,167,619	100,746,786	2,698,338	37	4,103	15	81

\* Lessee's Account.

## COMPARATIVE STATEMENTS FROM STREET RAILWAY RETURNS.

		PER MILE OF ROAD OWNED.			PER MILE OF ROAD OPERATED.			
		61.—Capital Stock Paid in.	62.—Net Debt.	63.—Cost of Construction.	64.—Cost of Equipment.	65.—Repairs of Road-bed and Track.	66.—Repairs of Equipment.	67.—Renewals of Horses.
1	Acushnet, . . . . .	\$21,331 06	\$785 75	\$11,620 48	\$6,933 74	-	-	-
2	Albany Street Freight, . . . . .	58,411 20	-	57,320 40	-	-	-	-
3	Arlington, . . . . .	8,629 44	-	8,629 44	-	-	-	-
4	Brookton, . . . . .	14,196 48	5,016 94	15,194 39	6,742 72	\$398 71	\$393 78	-
5	Black Rocks & Salisbury Beach, . . . . .	-	-	-	-	-	-	-
6	Boston & Chelsea, . . . . .	29,397 47	-	29,397 47	-	-	-	-
7	Cambridge, . . . . .	37,228 35	13,433 81	25,642 04	9,727 44	323 77	740 32	\$344 14
8	Charles River, . . . . .	23,571 56	18,524 92	20,673 83	8,001 94	25 90	434 55	55 24
9	Globe, . . . . .	19,910 40	1,983 85	14,454 00	5,116 92	227 69	722 68	282 47
10	Haverhill & Groveland, . . . . .	7,344 50	550 49	4,951 26	2,962 50	250 10	209 54	40 16
11	Highland, . . . . .	41,293 20	30,486 17	22,468 68	17,762 55	609 43	1,583 11	693 93
12	Holyoke, . . . . .	12,183 24	-	7,071 04	5,434 01	55 70	302 12	-
13	Lowell, . . . . .	16,087 78	-	12,690 76	4,241 53	1,479 68	956 63	649 61
14	Lynn & Boston, . . . . .	8,534 85	9,102 70	11,586 97	3,603 45	422 28	822 03	260 10
15	Malden & Melrose, . . . . .	43,188 94	-	19,498 83	-	-	-	-
16	Merrimac Valley, . . . . .	8,620 69	-	3,448 28	1,379 31	810 73	505 02	216 38
17	Metropolitan, . . . . .	19,304 27	21,614 73	20,842 96	11,774 07	783 31	2,038 17	873 99

18	Middlesex, . . . . .	43,015 38	16,855 61	32,695 47	9,752 55	156 82	1,093 40	452 87
19	Naumkeag, . . . . .	-	-	-	5,454 77	477 61	559 56	344 10
20	Natick & Cohituate, . . . . .	8,333 34	2,207 11	7,183 34	2,316 34	43 36	22 53	68 34
21	New Bedford & Fairhaven, . . . . .	18,243 24	1,126 89	13,056 53	5,907 14	400 71	836 83	268 65
22	Newburyport & Amesbury, . . . . .	9,090 91	4,132 94	12,236 58	-	-	-	-
23	Northampton, . . . . .	15,625 00	1,525 93	14,421 88	2,134 56	341 92	286 62	91 41
24	North Woburn, . . . . .	9,293 70	1,695 45	9,498 14	724 90	113 10	73 69	219 33
25	Salem, . . . . .	19,267 82	-	26,148 94	-	-	-	-
26	Salem & Danvers, . . . . .	11,363 64	-	6,773 70	2,352 19	291 95	120 32	83 64
27	Somerville, . . . . .	31,358 90	-	31,358 90	-	-	-	-
28	South Boston, . . . . .	57,625 82	12,008 85	23,260 71	18,719 51	461 22	1,882 56	729 67
29	Springfield, . . . . .	18,359 85	-	11,296 22	4,836 97	280 69	632 29	281 36
30	Stonham, . . . . .	12,313 43	-	12,537 31	3,222 20	499 03	814 69	339 55
31	Taunton, . . . . .	9,779 95	-	5,867 97	3,636 92	467 47	550 28	50 12
32	Waltham & Newton, . . . . .	9,342 85	4,546 52	11,676 55	2,411 82	502 09	141 55	-
33	Winnisimmet, . . . . .	26,550 55	-	26,550 55	-	-	-	-
34	Worcester, . . . . .	7,233 27	11,252 42	14,897 82	6,426 81	523 02	892 19	370 41
Average, . . . . .		\$23,201 72	\$11,806 72	\$18,582 47	\$8,498 86	\$454 18	\$1,057 63	\$437 14

## COMPARATIVE STATEMENTS FROM STREET RAILWAY RETURNS — Continued.

		GROSS INCOME.				EXPENSES.	
		68. — Per Mile Operated.	69. — Per Round Trip.	70. — Per Mile Run.	71. — Per Passenger Carried.	72. — Per Mile Operated.	73. — Per Round Trip.
STREET RAILWAYS.							
1	Acushnet, . . . . .	—	—	—	—	—	—
2	Albany Street Freight, . . . . .	—	—	—	—	—	—
3	Arlington, . . . . .	—	—	—	—	—	—
4	Brockton, . . . . .	\$9,489 31	\$1 59	\$0.3802	\$0.0564	\$7,051 12	\$3 41
5	Black Rocks & Salisbury Beach, . . . . .	—	—	—	—	—	—
6	Boston & Chelsea, . . . . .	—	—	—	—	—	—
7	Cambridge, . . . . .	12,060 69	2 17	.2700	.0511	9,818 80	1 77
8	Charles River, . . . . .	7,562 78	1 54	.2123	.0508	7,060 67	1 44
9	Globe, . . . . .	8,770 73	1 20	.2745	.0518	7,329 76	1 00
10	Haverhill & Groveland, . . . . .	4,223 19	1 94	.4126	.0630	2,964 62	1 36
11	Highland, . . . . .	22,355 06	1 98	.2873	.0495	19,196 42	1 70
12	Holyoke, . . . . .	5,688 49	81	.1978	.0564	5,061 67	72
13	Lowell, . . . . .	12,447 50	3 14	.3132	.0517	10,583 36	2 67
14	Lynn & Boston, . . . . .	8,300 19	2 63	.3054	.0539	7,111 88	2 25
15	Malden & Melrose, . . . . .	—	—	—	—	—	—
16	Merrimac Valley, . . . . .	7,458 69	1 25	.2500	.0633	5,814 73	97
17	Metropolitan, . . . . .	22,568 87	1 81	.2740	.0505	18,965 84	1 51

18	Middlesex, . . . . .	.	.	.	.	14,896 37	2 31	.3375	.0513	11,603 13	1 80
19	Naumkeag, . . . . .	.	.	.	.	6,925 03	2 92	.3463	.0577	5,349 82	2 25
20	Natick & Cochrutuate, . . . . .	.	.	.	.	785 52	3 07	.5121	.0736	659 29	2 58
21	New Bedford & Fairhaven, . . . . .	.	.	.	.	10,633 13	1 05	.2356	.0498	9,687 80	96
22	Newburyport & Amesbury, . . . . .	.	.	.	.	-	-	-	-	-	-
23	Northampton, . . . . .	.	.	.	.	3,418 78	1 64	.2571	.0811	2,958 85	1 42
24	North Woburn, . . . . .	.	.	.	.	1,459 31	1 08	.2009	.0462	1,310 16	97
25	Salem, . . . . .	.	.	.	.	-	-	-	-	-	-
26	Salem & Danvers, . . . . .	.	.	.	.	2,424 18	4 17	.2950	.0725	1,913 25	3 29
27	Somerville, . . . . .	.	.	.	.	-	-	-	-	-	-
28	South Boston, . . . . .	.	.	.	.	30,901 19	1 84	.2996	.0486	25,982 85	1 55
29	Springfield, . . . . .	.	.	.	.	9,207 57	1 33	.2807	.0531	7,175 82	1 04
30	Stoneham, . . . . .	.	.	.	.	7,806 25	2 16	.4313	.0887	6,013 57	1 66
31	Taunton, . . . . .	.	.	.	.	5,698 58	1 40	.2403	.0496	4,742 09	1 17
32	Waltham & Newton, . . . . .	.	.	.	.	3,311 40	2 85	.3797	.0615	3,090 99	2 66
33	Winnimmet, . . . . .	.	.	.	.	-	-	-	-	-	-
34	Worcester, . . . . .	.	.	.	.	12,830 87	1 63	.3347	.0489	9,306 45	1 18
Average, . . . . .						\$13,723 75	\$1 93	\$0.2859	\$0.0515	\$11,407 27	\$1 60



## COMPARATIVE STATEMENTS OF STREET RAILWAY RETURNS — Concluded.

STREET RAILWAYS.			EXPENSES — Continued.		NET INCOME.			
			74. — Per Mile Run.	75. — Per Passenger Carried.	76. — Per Mile Operated.	77. — Per Round Trip.	78. — Per Mile Run.	79. — Per Passenger Carried.
1	Acushnet, . . . . .	.	—	—	—	—	—	—
2	Albany Street Freight, . . . . .	.	—	—	—	—	—	—
3	Arlington, . . . . .	.	—	—	—	—	—	—
4	Brockton, . . . . .	.	\$0.2825	\$0.0419	\$2,438 19	\$1.18	\$0.0977	\$0.0145
5	Black Rocks & Salisbury Beach, . . . . .	.	—	—	—	—	—	—
6	Boston & Chelsea, . . . . .	.	—	—	—	—	—	—
7	Cambridge, . . . . .	.	.2198	.0418	2,241 89	.40	.0502	.0093
8	Charles River, . . . . .	.	.1982	.0474	502 11	.10	.0141	.0034
9	Globe, . . . . .	.	.2294	.0432	1,440 97	.20	.0451	.0085
10	Haverhill & Groveland, . . . . .	.	.2896	.0442	1,258 57	.58	.1230	.0188
11	Highland, . . . . .	.	.2467	.0425	3,158 64	.28	.0406	.0070
12	Holyoke, . . . . .	.	.1760	.0502	626 82	.09	.0218	.0062
13	Lowell, . . . . .	.	.2662	.0439	1,864 14	.47	.0470	.0078
14	Lynn & Boston, . . . . .	.	.2617	.0462	1,188 31	.38	.0437	.0077
15	Malden & Melrose, . . . . .	.	—	—	—	—	—	—
16	Merrimac Valley, . . . . .	.	.1949	.0494	1,643 96	.28	.0551	.0139
17	Metropolitan, . . . . .	.	.2302	.0425	3,603 03	.30	.0438	.0080

18	Middlesex, . . . . .	.2629	.0399	3,293 24	.51	.0746	.0115
19	Naumkeag, . . . . .	.2675	.0446	1,575 21	.67	.0788	.0131
20	Natick & Cohituate, . . . . .	.4298	.0618	126 23	.49	.0823	.0118
21	New Bedford & Fairhaven, . . . . .	.2146	.0454	945 33	.09	.0210	.0044
22	Newburyport & Amesbury, . . . . .	-	-	-	-	-	-
23	Northampton, . . . . .	.2225	.0701	455 93	.22	.0346	.0110
24	North Woburn, . . . . .	.1803	.0414	149 15	.11	.0206	.0048
25	Salem, . . . . .	-	-	-	-	-	-
26	Salem & Danvers, . . . . .	.2328	.0572	510 93	.88	.0622	.0153
27	Somerville, . . . . .	-	-	-	-	-	-
28	South Boston, . . . . .	.2519	.0408	4,918 34	.29	.0477	.0078
29	Springfield, . . . . .	.2188	.0414	2,031 75	.29	.0619	.0117
30	Stoneham, . . . . .	.3323	.0683	1,792 68	.50	.0990	.0204
31	Taunton, . . . . .	.2000	.0413	955 49	.23	.0403	.0083
32	Waltham & Newton, . . . . .	.3545	.0574	220 41	.19	.0252	.0041
33	Winnimmet, . . . . .	-	-	-	-	-	-
34	Worcester, . . . . .	.2428	.0355	3,524 42	.45	.0919	.0134
Average, . . . . .		\$0.2376	\$0.0428	\$2,316 48	\$0.33	\$0.0483	\$0.0087



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# TABULATED STATEMENT

COMPILED FROM

# RETURNS OF RAILROADS.

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RAILROADS AND BRANCHES. (BRANCHES IN ITALICS.)	WHERE LOCATED.		LENGTH.		DOUBLE TRACK.		SIDINGS.		7.—Total length computed as single track.
	From.	To.	1.—Total.	2.—In Mass.	3.—In Mass.	4.—Out of Mass.	5.—In Mass.	6.—Out of Mass.	
ATTLEBOROUGH BRANCH. (See <i>Boston &amp; Providence</i> ), . .	—	—	—	—	—	—	—	—	—
BERKSHIRE. (See <i>Housatonic</i> ), . .	—	—	—	—	—	—	—	—	—
BOSTON & ALBANY, . .	Boston, . .	Albany, N. Y., .	201.650	162.350	162.350	39.300	183.520	32.690	730.480
<i>Athol</i> , . .	Springfield, .	Athol, . .	46.510	46.510	—	—	—	—	—
<i>Grand Junction</i> , . .	Cottage Farm, .	East Boston, .	9.300	9.300	3.580	—	—	—	—
<i>Newton Lower Falls</i> , . .	Riverside Junc.,	Newton L. Falls,	1.100	1.100	—	—	—	—	—
<i>Newton Highlands</i> , . .	Beacon St., Boston, .	Cook St., Newton	6.890	6.890	6.560	—	—	—	—
<i>Saxonville</i> , . .	Natick, . .	Saxonville, . .	3.700	3.700	—	—	—	—	—
<i>Millford</i> , . .	S. Frammingham, .	Millford, . .	12.	12.	—	—	—	—	—
<i>Chatham &amp; Hudson</i> , . .	Millbury Junc., .	Millbury Village,	3.	3.	—	—	—	—	—
North Brookfield, . .	Chatham, N. Y., .	Hudson, N. Y., .	17.330	—	—	1.	.490	—	4.650
Pittsfield & North Adams, .	E. Brookfield, .	N. Brookfield, .	4.160	4.160	—	—	4.420	—	22.970
Providence, Webster & Springfield, . .	Pittsfield, . .	North Adams, .	18.550	18.550	—	—	—	—	—
Ware River, . .	North Webster, .	Auburn Station,	10.140	10.140	—	—	—	—	10.140
Spencer, . .	Palmer, . .	Winchendon, .	49.350	49.350	—	—	5.590	—	54.940
BOSTON & LOWELL, . .	Spencer, . .	B. & A. R.R., .	2.165	2.165	—	—	.745	—	2.910
<i>Lexington &amp; Arlington</i> , . .	Boston, . .	Lowell, . .	26.750	26.750	26.750	—	51.510	—	173.600
<i>Stoneham</i> , . .	Medford Junc., .	Lexington, . .	9.250	9.250	—	—	—	—	—
<i>Woburn</i> , . .	Woburn Junc., .	Stoneham, . .	2.500	2.500	—	—	—	—	—
<i>Mystic</i> , . .	Winchester, .	Woburn Centre,	2.	2.	—	—	—	—	—
<i>Lawrence</i> , . .	Milk Row Junc., .	Mystic Wharves,	2.250	2.250	—	—	—	—	—
<i>Middlesex Central</i> , . .	—	In Wilmington,	3.210	3.210	—	—	—	—	—
<i>Salem &amp; Lowell</i> , . .	Lexington, . .	Concord, . .	11.080	11.080	—	—	—	—	—
<i>Lowell &amp; Lawrence</i> , . .	Tewksbury, . .	Peabody, . .	16.800	16.800	—	—	—	—	—
<i>Bedford &amp; Billerica</i> , . .	Lowell, . .	S. Lawrence, .	12.420	12.420	—	—	—	—	—
	Bedford, . .	Billerica, . .	7.630	7.630	—	—	—	—	—



Horn Pond Branch,	Woburn Branch,	Horn Pond,	.663	.663	-	.076	-	.739
Nashua & Lowell,	Lowell, . . .	Nashua, N. H.,	14.500	9.250	9.250	4.134	1.950	35.084
Stony Brook,	N. Chelmsford, .	Ayer,	13.160	13.160	-	.950	-	14.110
BOSTON & MAINE,	Boston, . . .	Portland, Me.,	115.500	36.750	36.250	46.900	41.170	284.030
Medford,	Malden Junction,	Medford, . . .	2.	2.	-	-	-	-
Methuen,	Lawrence, . . .	Methuen (State Line of N.H.),	3.750	3.750	1.	-	-	-
Great Falls,	Rollinsf'd, N. H.,	Gt. Falls, N. H.,	2.750	-	-	-	-	-
Danvers, . . .	Wakefield Junc.,	Danvers, . . .	9.259	9.259	-	1.289	-	10.548
Eastern, . . .	Boston, . . .	State Line, N.H.,	41.450	41.450	27.920	62.580	-	213.110
East Boston,	Revere, . . .	East Boston,	3.470	3.470	1.560	-	-	-
Saugus, . . .	Everett, . . .	West Lynn,	9.550	9.550	-	-	-	-
Marblehead,	Salem, . . .	Marblehead,	3.520	3.520	-	-	-	-
Swampscott,	Swampscott, . .	Marblehead,	3.960	3.960	-	-	-	-
Lawrence, . .	Salem, . . .	Lawrence,	19.890	19.890	1.640	-	-	-
Gloucester, .	Beverly, . . .	Rockport, . .	16.940	16.940	-	-	-	-
Salisbury, . .	Salisbury, . . .	Amesbury,	3.790	3.790	-	-	-	-
Asbury Grove,	Hamilton Sta'n,	Asbury Grove,	1.060	1.060	-	-	-	-
Essex, . . .	Wenham, . . .	Essex,	5.480	5.480	-	-	-	-
Charlestown, .	-	In Charlestown,	1.090	1.090	1.090	-	-	-
South Reading,	Peabody, . . .	Wakefield Junc.,	8.120	8.120	-	-	-	-
Chelsea Beach, .	Oak Island Junc.	Saugus River J.,	1.780	1.780	-	.540	-	2.320
Newburyport City,	F. & B. & M R.R.	Wharves, . . .	2.080	2.080	.150	1.800	-	4.030
Lowell & Andover,	Lowell, . . .	Lowell Junc., .	8.730	8.730	8.730	3.940	-	22.770
Branch to Framing-	-	In Lowell,	1.150	1.150	-	-	-	-
ham & Lowell R. R.,	-	In Lowell,	.220	.220	-	-	-	-
Branch to Boston &	Bradford, . . .	Newburyport, .	26.979	26.979	-	3.282	-	30.261
Lowell Railroad,	Georgetown, . .	Danvers, . . .	4.450	2.130	-	.110	.380	4.940
Newburyport, . .	W. Amesbury, . .	Newton, N. H.,	-	-	-	-	-	-
West Amesbury Branch,	-	-	-	-	-	-	-	-

RAILROADS AND BRANCHES. (BRANCHES IN ITALICS.) (Continued.)	WHERE LOCATED.		LENGTH.		DOUBLE TRACK.		SIDINGS.		7.—Total length com- puted as single track.
	From.	To.	1.—Total.	2.—In Mass.	3.—In Mass.	4.—Out of Mass.	5.—In Mass.	6.—Out of Mass.	
BOSTON & PROVIDENCE, <i>West Roxbury,</i>	Boston,	Providence, R.I.,	44.	38.142	38.142	5.858	37.000	12.000	156.752
<i>Dedham,</i>	Forest Hills Sta'n,	Dedham, . .	5.366	5.366	—	—	—	—	—
<i>Stoughton,</i>	Readville, . .	Dedham, . .	2.224	2.224	—	—	—	—	—
<i>India Point,</i>	Canton, . .	Stoughton, . .	4.114	4.114	—	—	—	—	—
Attleborough Branch, . .	Seekonk, . .	Providence, R.I.,	8.048	3.485	—	—	—	—	—
BOSTON, WINTHROP & SHORE, <i>Narrow Gauge,</i>	Attleborough, . .	N. Attleborough,	4.	4.	—	—	1.	—	5.
<i>Wide Gauge,</i>	Point Shirley, . .	Point of Pines, . .	6.410	6.410	—	—	.810	—	9.460
CHESHIRE, . . . . .	Ocean Spray, . .	Winthrop J., . .	1.780	1.780	—	—	—	—	—
Monadnock, . . . . .	Crescent Beach, . .	Revere J., . .	.460	.460	—	—	—	—	—
CHILSEA BEACH (See <i>Eastern</i> ), . .	S. Ashburnham, . .	Bellows Falls, Vt.,	53.620	10.810	—	—	3.170	13.580	70.370
CONNECTICUT RIVER, . . . .	Winchendon, . .	Peterboro', N.H.,	15.800	2 038	—	—	—	.700	16.500
<i>Chicopee Falls,</i>	—	—	—	—	—	—	—	—	—
<i>Easthampton,</i>	Springfield, . .	S. Vernon, Vt., . .	50.	50.	36.000	—	40.960	—	132.810
DANVERS. (See <i>Boston &amp;</i> <i>Maine</i> ), . . . . .	Chicopee, . .	Chicopee Falls, . .	2.350	2.350	—	—	—	—	—
DORCHESTER & MILTON. (See <i>Old Colony</i> ), . . . .	Mt. Tom June, . .	Easthampton, . .	3.500	3 500	—	—	—	—	—
EASTERN. (See <i>Boston &amp;</i> <i>Maine</i> ), . . . . .	—	—	—	—	—	—	—	—	—
FALL RIVER. (See <i>Old Colony</i> ), . .	—	—	—	—	—	—	—	—	—
FALL RIVER, WARREN & PROVIDENCE (owned by <i>Old Colony Railroad Co.</i> ),	—	—	—	—	—	—	—	—	—
	Fall River, . .	Warren, R. I., . .	5.794	3.662	—	—	.040	.480	6.314

FITCHBURG,	Boston,	Fitchburg,	50.	50.	50.	74.680	1.520	255.790
<i>Ice,</i>	-	In Charlestown,	.680	.680	-	-	-	-
<i>Watertown Branch,</i>	N. Cambridge,	Waltham,	6.600	6.600	-	-	-	-
<i>Lancaster &amp; Marlborough</i>	South Acton,	Marlborough,	12.420	12.420	-	-	-	-
<i>Peterborough &amp; Shirley,</i>	Ayer,	Greenville, N.H.,	23.620	23.620	-	-	-	-
<i>Worcester,</i>	Worcester,	Winchendon,	36.000	36.000	-	-	-	-
<i>Ashburnham,</i>	-	In Ashburnham,	2.590	2.590	-	-	-	-
Vermont & Massachusetts,	Fitchburg,	Greenfield,	56.	56.	54.160	32.780	-	145.740
<i>Turner's Falls,</i>	Greenfield,	Turner's Falls,	2.800	2.800	-	-	-	-
HANOVER BRANCH,	N. Abington,	South Hanover,	8.	8.	-	1.	-	9.
HOLYOKE & WESTFIELD. (See	-	-	-	-	-	-	-	-
<i>N. Haven &amp; Northampton</i> ),	-	-	-	-	-	-	-	-
HORN POND BRANCH. (See	-	-	-	-	-	-	-	-
<i>Boston &amp; Lowell</i> ),	-	-	-	-	-	-	-	-
HOUSATONIC (Ct.),	-	-	-	-	-	-	-	-
Berkshire,	W. Stockbridge,	State Line of Ct.,	22.	22.	-	2.810	-	24.810
Stockbridge & Pittsfield,	Vandeuensville,	Pittsfield,	22.	22.	-	4.420	-	26.420
West Stockbridge,	W. Stockbridge,	State Line, N.Y.,	2.750	2.750	-	3.750	-	6.500
LOWELL & ANDOVER. (See	-	-	-	-	-	-	-	-
<i>Boston &amp; Maine</i> ),	-	-	-	-	-	-	-	-
<i>Branch to Framingham</i>	-	-	-	-	-	-	-	-
<i>&amp; Lowell Railroad,</i>	-	-	-	-	-	-	-	-
<i>Branch to Boston &amp;</i>	-	-	-	-	-	-	-	-
<i>Lowell Railroad,</i>	-	-	-	-	-	-	-	-
LOWELL & FRAMINGHAM.	-	-	-	-	-	-	-	-
(See <i>Old Colony</i> ),	Cambridge,	-	44.030	44.030	-	3.130	-	47.160
MASSACHUSETTS CENTRAL,	-	-	-	-	-	-	-	-
MILFORD, FRANKLIN & PROV.	-	-	-	-	-	-	-	-
(See <i>Milford &amp; Woonsocket</i> ),	-	-	-	-	-	-	-	-
MILFORD & WOONSOCKET,	Ashland,	Bellingham,	15.327	15.327	-	1.561	-	16.888
Milford, Franklin & Prov.,	Franklin,	Bellingham,	4.600	4.600	-	.407	-	5.007
MONADNOCK. (See <i>Cheshire</i> ),	-	-	-	-	-	-	-	-

RAILROADS AND BRANCHES. (BRANCHES IN ITALICS.) (Continued.)	WHERE LOCATED.		LENGTH.		DOUBLE TRACK.		SIDINGS.		7.—Total length com- puted as single track.
	From.	To.	1.—Total.	2.—In Mass.	3.—In Mass.	4.—Out of Mass.	5.—In Mass.	6.—Out of Mass.	
NANTASKET BEACH, NASHUA, ACTON & BOSTON (op- erated by Concord, N. H.), NASHUA & LOWELL. (See Boston & Lowell), NEWBURYPORT. (See Bost. & Me.), NEWBURYPORT CITY. (See Boston & Maine), NEW HAVEN & NORTHAMPTON, Collinsville (Ct.), Tariffville, Northampton, Turner's Falls, Holyoke & Westfield, NEW LONDON NORTHERN (op- erated by J. Gregory Smith and others), NEW YORK & NEW ENGLAND, { Woonsocket Division, Southbridge, New Dedham, Dorranee Street, Ridge Hill, Hartford Freight,	Old Colony H'se. Acton, — — — New Haven, Ct., Farmington, Ct., Simsbury, Ct., Northampton, So. Deerfield, Westfield, New London, Ct., Boston, Wicopee Junct., Providence, Newton H'ds., E. Thompson, Ct., Elmwood Jct., — — —	Pemberton, Hull, Nashua, N. H., — — — Conway Jct., N. Hartford, Ct., Tariffville, Ct., Williamsburg, Turner's Falls, Holyoke, Brattleboro', Vt., Hopewell Jc. N.Y., Fishkill-on-Hud., Williamantic, Ct., Woonsocket, R.I Southbridge, Dedham, In Providence, — In Hartford,	6.933 20.210 — — — 94.640 14.090 1.040 7.510 10.070 14.320 121. 215.040 1.800 58.500 28.410 17.370 1.520 .820 1.640 .670	6.933 15.460 — — — 43.380 — — 7.510 10.070 14.320 54. 52. — — 27.410 12.020 1.520 — 1.640 —	— — — — — — — — — — — — 52.000 — — — — — — — —	— — — — — — — — — — — — 56.100 — — — — — — — —	— 2.535 .850 — — — 13.820 — — — 2.900 — 10.080 38.380 — — — — — —	— — — — — — — — — — — — 17.240 79.300 — — — — — — —	9.468 22.740 — — — 155.510 — — — — 17.220 148.320 551.550 — — — — — — — —







SOUTHERN VERMONT, . . .	Greenfield, . . .	In Vermont, . . .	6.170	-	-	-	6.170
TROY & GREENFIELD, . . .	B. & L. R. R., . . .	State Line, Vt., . . .	44.	44.000	-	-	110.520
UNION FREIGHT, . . .		Old Colony R.R., . . .	2.431	.937	-	-	4.518
VERMONT & MASSACHUSETTS. (See <i>Fitchburg</i> ), . . .	-	-	-	-	-	-	-
(See <i>Turner's Falls</i> ), (See <i>Fitchburg</i> ), . . .	-	-	-	-	-	-	-
WARE RIVER. (See <i>Boston &amp;</i> <i>Albany</i> ), . . .	-	-	-	-	-	-	-
WEST AMESBURY BRANCH. (See <i>Boston &amp; Maine</i> ), . . .	-	-	-	-	-	-	-
WEST STOCKBRIDGE. (See <i>Housatonic</i> ), . . .	-	-	-	-	-	-	-
WORCESTER, NASHUA & ROCH- ESTER, . . .	Worcester, . . .	Rochester, N.H., . . .	94.480	39.460	18.130	7.600	132.710
NARROW GAUGE.							
BOSTON, REVERE BEACH & LYNN, . . .	East Boston, . . .	Lynn, . . .	8.800	8.800	6.700	-	17.750
GRAFTON CENTRE, . . .	Grafton Station, . . .	Grafton Centre, . . .	3.	3.	-	-	3.100
MARTHA'S VINEYARD, . . .	Oak Bluffs, . . .	Katama, . . .	8.330	8.330	-	-	9.280
<i>Katama</i> , . . .	Katama, . . .	South Beach, . . .	.450	.450	-	-	-
NANTUCKET, . . .	Nantucket, . . .	Siasconset, . . .	11.160	11.160	-	-	11.960
WORCESTER & SHREWSBURY, LYNN, . . .	Worcester, . . .	L. Quinsigamond, . . .	2.700	2.700	-	-	2.700
Total, . . .	. . .	. . .	2,859.793	1,981.688	699.639	277.448	5,040.022

	8.—BOSTON & ALBANY.	9.—FITCHBURG.	10.—BOSTON & LOWELL.	11.—BOSTON & MAINE.
<b>CAPITAL STOCK.</b>				
Amount paid in, . . . . .	\$20,000,000 00	\$5,286,500 00	\$4,541,700 00	\$6,921,274 52
Number of stockholders, . . . . .	6,693	3,054	1,343	4,119
Stockholders in Massachusetts, . . . . .	5,783	2,625	1,173	2,115
Amount of stock held in Massachusetts, . . . . .	\$17,366,500 00	\$4,639,700 00	\$4,052,800 00	\$4,303,600 00
<b>DEBT.</b>				
Funded debt, . . . . .	\$10,858,000 00	\$5,140,600 00	\$4,046,400 00	\$4,115,000 00
Unfunded debt, . . . . .	890,509 41	927,342 34	1,224,770 88	1,827,796 66
<b>TOTAL GROSS DEBT,</b> . . . . .	11,748,509 41	6,067,942 34	5,271,170 88	5,942,796 66
<b>PERMANENT INVESTMENTS.</b>				
Construction, . . . . .	\$25,385,175 50	\$5,606,057 35	\$6,646,337 81	\$9,620,937 63
Equipment, . . . . .	3,145,400 00	2,659,189 14	1,188,529 41	1,308,180 00
Other property, . . . . .	1,652,500 96	1,109,299 05	1,436,438 78	1,089,994 33
<b>TOTAL PERMANENT INVESTMENTS,</b> . . . . .	30,183,076 46	9,374,545 54	9,271,306 00	12,019,111 96
Cash and cash assets, . . . . .	2,624,659 91	2,369,938 41	1,585,754 43	2,677,143 27
<b>TOTAL PROPERTY AND ASSETS,</b> . . . . .	32,807,736 37	11,744,483 95	10,857,060 43	14,696,255 23
<b>REVENUE FOR THE YEAR.</b>				
From local passengers, . . . . .	\$2,020,783 67	\$732,482 16	\$1,233,050 64	\$3,114,095 38
through passengers, . . . . .	1,050,479 47	246,722 57	386,529 34	430,206 50
express and extra baggage, . . . . .	229,693 74	65,611 08	93,098 00	162,976 73
mails, . . . . .	141,586 90	30,450 44	57,781 16	89,416 12
other sources passenger department, . . . . .	—	—	—	—
<i>Total earnings passenger department,</i> . . . . .	3,442,543 78	1,075,266 25	1,776,459 14	3,796,694 73

From local freight, . . . . .	1,845,820 73	711,956 63	1,100,402 45	1,887,136 47
through freight, . . . . .	1,920,108 01	1,000,205 70	1,072,392 24	548,264 69
other sources freight department, . . . . .	—	—	—	—
<i>Total earnings freight department, . . . . .</i>	3,765,928 74	1,712,162 33	2,172,794 69	2,435,401 16
TOTAL TRANSPORTATION EARNINGS, . . . . .	7,208,472 52	2,787,428 58	3,949,253 83	6,232,095 89
From rents for use of road, . . . . .	—	51,000 00	—	22,253 48
all other sources, . . . . .	429,509 50	52,822 48	88,186 09	257,210 45
TOTAL INCOME FROM ALL SOURCES, . . . . .	7,637,982 02	2,891,251 06	4,037,439 92	6,511,559 82
EXPENSES.				
Transportation expenses, . . . . .	\$4,741,270 94	\$2,009,867 35	\$2,623,434 20	\$3,965,022 49
Taxes, . . . . .	552,405 18	137,093 26	163,204 42	204,637 83
TOTAL EXPENSES, . . . . .	5,293,676 12	2,146,960 61	2,786,638 62	4,169,660 32
NET INCOME, DIVIDENDS, ETC.				
Net income, . . . . .	\$2,344,305 90	\$744,290 45	\$1,250,801 30	\$2,341,899 50
Rents, . . . . .	75,000 00	252,581 50	702,543 32	1,360,037 69
Interest accrued, . . . . .	662,900 00	220,688 00	263,281 94	281,861 81
Dividends earned, . . . . .	1,606,405 90	271,020 95	284,976 04	700,000 00
Per cent., . . . . .	8.0	5.8	7.0	10.0
Dividends declared, . . . . .	1,547,804 00	247,500 00	251,151 00	560,000 00
Per cent., . . . . .	8.0*	5.0	6.0	8.0
Balance for the year, . . . . .	58,601 90	23,520 95	33,825 04	140,000 00
Surplus last year, . . . . .	61,847 53	366,520 66	440,414 50	1,692,184 05
Surplus Sept, 30, 1885, . . . . .	1,059,226 96†	390,041 61	474,239 54	1,832,184 05

\* On stock other than that held in the treasury of the company (\$1,044,337).

† Includes Improvement Fund of \$938,777.53.

	8. — BOSTON & ALBANY — Con.	9. — FITCHBURG — Con.	10. — BOSTON & LOWELL — Con.	11. — BOSTON & MAINE — Con.
MILEAGE, TRAFFIC, ETC.				
Passenger-train mileage, . . . . .	1,985,604	1,114,449	1,863,169	2,764,801
Freight-train mileage, . . . . .	3,141,895	990,878	1,430,342	1,279,186
Total revenue-train mileage, . . . . .	5,127,499	2,105,327	3,293,511	4,043,987
Switching-train mileage, . . . . .	523,239	530,108	605,961	731,892
Other train mileage, . . . . .	138,654	52,852	134,091	148,185
TOTAL TRAIN MILEAGE, . . . . .	5,789,392	2,688,287	4,033,563	4,924,014
Number season-ticket passengers, . . . . .	533,212	267,048	641,627	2,635,559
Number local passengers (including season), . . . . .	7,906,471	3,556,131	5,592,799	15,050,868
Number through passengers,* . . . . .	967,559	234,904	351,545	536,507
Total number of passengers carried, . . . . .	8,874,030	3,791,035	5,944,344	15,587,375
Local passenger mileage, . . . . .	114,657,905	40,084,800	61,757,204	175,702,569
Through passenger mileage,* . . . . .	52,439,879	13,333,853	17,911,476	28,618,452
Total passenger mileage, . . . . .	167,097,784	53,418,653	79,668,680	204,321,021
Tons of local freight carried, . . . . .	1,669,800	705,550	1,087,284	1,720,787
Tons of through freight carried,* . . . . .	1,776,613	1,452,733	1,140,274	412,167
Total tons of freight carried, . . . . .	3,446,413	2,158,283	2,227,558	2,132,954
Local freight mileage, . . . . .	113,188,240	24,053,544	36,719,023	76,648,303
Through freight mileage,* . . . . .	285,673,818	137,852,206	86,236,177	37,857,741
Total freight mileage, . . . . .	398,862,058	161,905,750	122,955,200	114,506,044
Av. rate of fare per mile, local passengers, through passengers,* . . . . .	1.91 cents.	1.89 cents.	2.20 cents.	2.14 cents.
season-ticket passengers, . . . . .	2.00 "	1.85 "	2.16 "	1.50 "
ALL PASSENGERS, . . . . .	.64 "	.69 "	.82 "	.67 "
ALL PASSENGERS, . . . . .	1.84 "	1.83 "	2.04 "	1.735 "
Av. rate of freight per mile, local freight, through freight,* . . . . .	1.63 "	2.96 "	2.99 "	2.462 "
ALL FREIGHT, . . . . .	.61 "	.73 "	1.24 "	1.448 "
ALL FREIGHT, . . . . .	.94 "	1.06 "	1.77 "	2.127 "



Passengers to Boston (including season), . . .	.	.	.	2,763,563	1,299,223	2,097,448	5,245,363
Passengers from Boston (including season), . .	.	.	.	2,805,879	1,295,634	2,183,057	5,229,474
Season-ticket passengers to and from Boston,	.	.	.	448,654	150,996	570,565	1,714,468
EQUIPMENT.							
Number of locomotives, . . .	.	.	.	243	107	168	207
passenger cars, . . .	.	.	.	209	127	164	337
parlor and sleeping cars, . . .	.	.	.	14	—	10	11
mail, baggage, and express cars, . . .	.	.	.	51	28	83	80
freight cars (basis 8 wheels), . . .	.	.	.	5,474	3,380	3,289	3,586
other cars, . . .	.	.	.	649	160	34	221
GENERAL INFORMATION, ETC.							
Total miles of road operated, . . .	.	.	.	384.42	227.71	689.56	489.17
Same in Massachusetts, . . .	.	.	.	327.79	218.34	131.76	209.31
Average number of persons employed, . . .	.	.	.	4,961	2,125	3,227	4,477

\* To and from other roads.

	12.—BOSTON & PROVIDENCE.	13.—NEW YORK & NEW ENGLAND.	14.—OLD COLONY.	15.—ASHBURNHAM.*	16.—BOSTON, BARRE & GARDNER.†
<b>CAPITAL STOCK.</b>					
Amount paid in, . . . . .	\$4,000,000 00	\$20,000,000 00†	\$10,845,100 00\$	\$30,000 00	
Number of stockholders, . . . . .	1,610	1,362¶	5,701	1	—
Stockholders in Massachusetts, . . . . .	1,269	942¶	5,330	1	—
Amount of stock held in Massachusetts, . . . . .	\$3,328,700 00	\$7,849,400 00¶	\$10,155,800 00	\$30,000 00	—
<b>DEBT.</b>					
Funded debt, . . . . .	\$810,000 00	\$15,935,603 56	\$9,473,300 00	\$6,000 00	—
Unfunded debt, . . . . .	224,969 14	2,203,384 11	1,046,233 35	—	—
TOTAL GROSS DEBT, . . . . .	1,034,969 14	18,138,987 67	10,519,533 35	6,000 00	—
<b>PERMANENT INVESTMENTS.</b>					
Construction, . . . . .	\$4,688,774 38	\$32,428,177 95	\$17,031,579 43	\$30,000 00	—
Equipment, . . . . .	207,400 00	3,795,672 37	2,165,759 08	6,000 00	—
Other property, . . . . .	285,606 50	484,190 40	2,160,517 43	—	—
TOTAL PERMANENT INVESTMENTS, . . . . .	5,181,780 88	36,708,040 72	21,357,855 94	36,000 00	—
Cash and cash assets, . . . . .	305,362 38	737,165 18	1,036,609 22	50 10	—
TOTAL PROPERTY AND ASSETS, . . . . .	5,487,143 26	37,445,205 90	22,394,465 16	36,050 10	—
<b>REVENUE FOR THE YEAR.</b>					
From local passengers, . . . . .	\$856,427 64	\$811,915 68	\$1,804,377 25	\$1,160 25	\$14,967 02
through passengers, . . . . .	132,847 39	322,257 25	425,583 94	—	8,320 66
express and extra baggage, . . . . .	39,632 30	104,203 41	137,852 57	—	1,371 44
mails, . . . . .	13,087 45	45,849 03	38,652 29	71 82	1,300 17
other sources passenger department, . . . . .	—	—	—	—	—
Total earnings passenger department, . . . . .	1,061,994 78	1,284,225 37	2,406,466 05	1,232 07	25,959 29

From local freight, through freight, . . . . .	346,275 65	645,420 40	1,155,352 06	2,402 28	9,767 44
other sources freight department, <i>Total earnings freight department,</i> . . . . .	246,941 45	1,194,578 85	609,036 97	—	23,407 23
<i>TOTAL TRANSPORTATION EARNINGS,</i> . . . . .	593,217 10	1,839,999 25	1,764,389 03	2,402 28	33,174 67
From rents for use of road, . . . . .	1,655,211 88	3,124,224 62	4,170,855 08	3,634 35	59,133 96
all other sources, . . . . .	21,854 25	179,450 44	3,600 00	—	—
<b>TOTAL INCOME FROM ALL SOURCES,</b> . . . . .	1,677,066 13	3,303,675 06	4,570,270 56	3,634 35	923 37
<b>EXPENSES.</b>					
Transportation expenses, . . . . .	\$1,190,374 71	\$2,274,155 95	\$2,895,244 26	\$3,245 66	\$72,536 27
Taxes, . . . . .	93,741 88	82,303 47	236,943 13	59 78	1,002 00
<b>TOTAL EXPENSES,</b> . . . . .	1,284,116 59	2,356,459 42	3,132,187 39	3,305 44	73,538 27
<b>NET INCOME, DIVIDENDS, ETC.</b>					
Net income, . . . . .	\$392,949 54	\$947,215 64	\$1,438,083 17	\$328 91	\$13,480 94 <i>d</i>
Rents, . . . . .	11,622 94	130,132 16	45,593 95	—	—
Interest accrued, . . . . .	27,623 73	992,535 72	551,424 57	180 00	32,012 21
Dividends earned, . . . . .	353,702 87	—	841,064 65	148 91	—
Per cent., . . . . .	8 8	—	7 8	—	—
Dividends declared, . . . . .	320,000 00	—	738,122 00	—	—
Per cent., . . . . .	8 0	—	7 0	—	—
Balance for the year, . . . . .	32,702 87	177,130 87 <i>d</i>	102,942 65	148 91	+45,493 15 <i>d</i>
Surplus last year, . . . . .	418,471 25	516,650 90 <i>d</i>	923,369 16	98 81 <i>d</i>	232,527 03 <i>d</i>
Surplus Sept. 30, 1885, . . . . .	452,174 12	693,781 77 <i>d</i>	1,026,311 81	**50 10	+328,020 18 <i>d</i>

\* Operations to April 23d, when the road was sold to the Fitchburg R. R. Co.

† Operations to March 7, 1885, when the road was operated by the Fitchburg R. R. Co., and consolidated with the same company July 1, 1885.

‡ The amount of the "Berdell Bonds" at which the capital stock was fixed, under the terms of the mortgage, and which are exchangeable only for capital stock.

§ Not including \$3,520 stock of B. C. F. & N. B. R. Co. unconverted.

|| Capital stock, debt and investments are included in the accounts of the Fitchburg Railroad Company.

¶ Not including holders of "Berdell Bonds" unexchanged.

*d* Deficit.

\*\* April 23, 1885.

	12. — BOSTON & PROVIDENCE — Con.	13. — NEW YORK & NEW ENGLAND — Con.	14. — OLD COLONY — Con.	15. — ASHBURNHAM — Con.	16. — BOSTON, BAKRE & GARDNER — Con.
<b>MILEAGE, TRAFFIC, ETC.</b>					
Passenger-train mileage, . . . . .	722,455	1,195,799	1,700,997	3,785	31,790
Freight-train mileage, . . . . .	242,047	935,667	719,689	—	20,023
Total revenue-train mileage, . . . . .	964,502	2,131,466	2,420,686	3,785	51,813
Switching-train mileage, . . . . .	63,186	520,029	662,666	—	2,200
Other train mileage, . . . . .	—	59,290	270,772	—	700
TOTAL TRAIN MILEAGE, . . . . .	1,027,688	2,710,785	3,354,124	3,785	54,713
Number season ticket passengers, . . . . .	521,606	754,879	2,088,654	—	10,712
Number local passengers (including season), . . . . .	5,363,865	3,984,364	7,398,057	12,087	41,544
Number through passengers,* . . . . .	248,545	636,215	922,817	—	11,113
Total number of passengers carried, . . . . .	5,612,410	4,620,579	8,320,874	12,087	52,657
Local passenger mileage, . . . . .	47,801,137	42,812,167	103,382,204	30,217	523,871
Through passenger mileage,* . . . . .	7,145,997	16,006,220	20,792,477	—	298,070
Total passenger mileage, . . . . .	54,947,134	58,818,387	124,174,681	30,217	821,941
Tons of local freight carried, . . . . .	386,461	500,547	1,062,246	4,229	12,343
Tons of through freight carried,* . . . . .	323,392	1,215,114	629,879	—	57,767
Total tons of freight carried, . . . . .	709,853	1,715,661	1,692,125	4,229	70,110
Local freight mileage, . . . . .	10,158,250	17,209,793	32,467,988	10,563	264,447
Through freight mileage,* . . . . .	10,805,291	90,430,160	27,666,203	—	1,473,209
Total freight mileage, . . . . .	20,963,541	107,639,953	60,134,191	10,563	1,737,656
Av. rate of fare per mile, local passengers, . . . . .	1.91 cents.	2.08 cents.	2.00 cents.	—	3.47 cents.
through passengers,* . . . . .	2.14 "	2.01 "	2.00 "	—	3.02 "
season-ticket passengers, . . . . .	.91 "	.79 "	.70 "	—	1.26 "
ALL PASSENGERS, . . . . .	1.84 "	1.93 "	1.70 "	—	2.81 "
Av. rate of freight per mile, local freight, . . . . .	3.41 "	3.75 "	4.20 "	—	7.13 "
through freight,* . . . . .	2.29 "	1.32 "	2.10 "	—	2.10 "
ALL FREIGHT, . . . . .	2.83 "	1.71 "	2.90 "	—	2.58 "

Passengers to Boston (including season),	2,076,982	1,024,901	2,329,192	-	-
Passengers from Boston (including season),	2,147,488	1,022,817	2,359,077	-	-
Season-ticket passengers to and from Bost'n,	398,285	222,524	1,340,824	-	-
<b>EQUIPMENT.</b>					
Number of locomotives, . . . . .	57	147	127	1	-
passenger cars, . . . . .	150	150	235	1	-
parlor and sleeping cars, . . . . .	24†	3	9	-	-
mail, baggage, and express cars, . . . . .	25	41	39	-	-
freight cars (basis 8 wheels), . . . . .	503	3,559	2,291	-	-
other cars, . . . . .	392	9	13	-	-
<b>GENERAL INFORMATION, ETC.</b>					
Total miles of road operated, . . . . .	67,752	378.45	469.07	2 500	86.53
Same in Massachusetts, . . . . .	57,331	108.36	452.88	2.500	86.53
Average number of persons employed, . . . . .	949	2,876	3,211	3	132

\* To and from other roads.

† Line cars 8 per cent. owned.



	17.—BOSTON, WINTHROP & SHORE.	18.—CHESHIRE.	19.—CONNECTICUT RIVER.	20.—FALL RIVER, WARREN & PROVIDENCE.	21.—HANOVER BRANCH.
<b>CAPITAL STOCK.</b>					
Amount paid in, . . . . .	\$274,600 00	\$2,153,300 00	\$2,370,000 00	\$150,000 00	\$123,950 00
Number of stockholders, . . . .	70	504	925	27	100
Stockholders in Massachusetts, . .	67	378	736	11	97
Amount of stock held in Massachusetts, .	\$236,900 00	\$1,552,000 00	\$1,902,400 00	\$103,300 00	\$122,500 00
<b>DEBT.</b>					
Funded debt, . . . . .	\$259,200 00	\$800,000 00	—	\$300,000 00	\$20,000 00
Unfunded debt, . . . . .	4,427 69	80,495 50	\$850,769 52	5,461 03	1,077 00
TOTAL GROSS DEBT, . . . . .	263,627 69	880,495 50	850,769 52	305,461 03	21,077 00
<b>PERMANENT INVESTMENTS.</b>					
Construction, . . . . .	\$395,931 79	\$2,395,268 94	\$2,987,120 55	\$310,747 60	\$194,826 66
Equipment, . . . . .	19,087 76	322,266 32	389,867 50	—	71,312 69
Other property, . . . . .	116,100 00	—	99,610 00	—	2,565 00
TOTAL PERMANENT INVESTMENTS, . .	531,119 55	2,717,535 26	3,476,598 05	310,747 60	268,704 35
Cash and cash assets, . . . . .	916 43	381,851 14	721,000 29	5,749 99	5,595 06
TOTAL PROPERTY AND ASSETS, . . . .	532,035 98	3,099,386 40	4,197,598 34	316,497 59	274,299 41
<b>REVENUE FOR THE YEAR.</b>					
From local passengers, . . . . .	\$25,558 28	\$41,785 93	\$254,445 73	\$347 11	\$7,624 02
through passengers, . . . . .	—	110,198 48	101,476 39	21,423 91	14,089 19
express and extra baggage, . . . .	—	7,500 00	15,823 61	1,500 00	1,661 41
mails, . . . . .	—	9,098 03	11,787 00	484 96	250 92
other sources passenger department, .	—	7,500 00	—	—	—
Total earnings passenger department, .	25,558 28	176,082 44	383,532 73	23,755 98	23,625 54



	17.—BOSTON, WINTHROP & SHORE—CON.	18.—CHESHIRE—CON.	19.—CONNECTICUT RIVER—CON.	20.—FALL RIVER, WARREN & PROVIDENCE—CON.	21.—HANOVER BRANCH—CON.
MILEAGE, TRAFFIC, ETC.					
Passenger-train mileage, . . . . .	32,439	158,883	344,601	26,620	16,000
Freight-train mileage, . . . . .	—	341,194	146,497	6,200	9,920
Total revenue-train mileage, . . . . .	32,439	500,077	491,098	32,820	25,920
Switching-train mileage, . . . . .	—	43,669	82,967	—	—
Other train mileage, . . . . .	—	12,660	20,884	—	—
TOTAL TRAIN MILEAGE, . . . . .	32,439	556,406	594,949	32,820	25,920
Number season-ticket passengers, . . . . .	—	4,806	286,729	—	11,460
Number local passengers (including season), . . . . .	218,912	81,419	1,261,779	5,617	24,390
Number through passengers, * . . . .	27,364	87,673	153,922	145,213	72,640
Total number of passengers carried, . . . . .	246,276	169,092	1,415,701	150,830	97,030
Local passenger mileage, . . . . .	1,630,550	1,445,124	11,189,540	12,699	73,260
Through passenger mileage, * . . . .	44,070	3,535,029	3,976,336	940,829	213,960
Total passenger mileage, . . . . .	1,674,620	4,980,153	15,165,876	953,528	287,220
Tons of local freight carried, . . . . .	—	36,393	194,655	80	2,742
Tons of through freight carried, * . . . .	—	464,927	411,690	15,185	17,890
Total tons of freight carried, . . . . .	—	501,320	606,345	15,265	20,632
Local freight mileage, . . . . .	—	942,128	3,001,497	342	14,160
Through freight mileage, * . . . .	—	26,599,793	12,091,588	121,480	57,942
Total freight mileage, . . . . .	—	27,541,921	15,093,085	121,822	72,102
Av. rate of fare per mile, local passengers, through passengers, * . . . .	2.04 cents.	3.50 cents.	2.27 cents.	2.73 cents.	3.05 cents.
season-ticket passengers, . . . . .	—	3.10 "	2.55 "	2.27 "	2.20 "
ALL PASSENGERS, . . . . .	—	1.40 "	.73 "	—	1.06 "
Av. rate of freight per mile, local freight, through freight, * . . . .	2.66 cents.	3.00 "	2.34 "	2.28 cents.	2.02 "
ALL FREIGHT, . . . . .	—	5.00 "	4.89 "	4.70 "	1.09 "
	—	1.28 "	2.48 "	4.82 "	2.31 "
	—	1.33 "	2.96 "	4.85 "	2.12 "

## EQUIPMENT.

Number of locomotives, . . .	3	31	42	†	3
passenger cars, . . .	12	26	32	-	4
parlor and sleeping cars, . . .	-	-	-	-	-
mail, baggage, and express cars,	-	11	18‡	-	2
freight cars (basis 8 wheels), . .	-	453	486	-	18
other cars, . . .	5	32	47	-	-

## GENERAL INFORMATION, ETC.

Total miles of road operated, . .	8.65	64.01	79.850	5,794	8.00
Same in Massachusetts, . . .	8.65	21.20	55.925	3,662	8.00
Average number of persons employed,	25	315	560	20	28

\* To and from other roads.

† Leases equipment of Old Colony Railroad Company.

‡ Includes 15 combination cars.

	22. — HOUSATONIC OF CONNECTICUT.*	23. — MILFORD & WOONSOCKET.	24. — NANTASKET BEACH †	25. — NEW HAVEN & NORTHAMPTON.	26. — NEW LONDON NORTHERN. †
<b>CAPITAL STOCK.</b>					
Amount paid in, . . . . .	—	\$148,600 00	—	\$2,460,000 00	\$1,500 000 00
Number of stockholders, . . . . .	—	30	—	255	336
Stockholders in Massachusetts, . . . . .	—	28	—	79	57
Amount of stock held in Massachusetts, . . . . .	—	\$140,800 00	—	\$114,900 00	\$311,600 00
<b>DEBT.</b>					
Funded debt, . . . . .	—	\$19,000 00	—	\$3,200,000 00	\$1,499,500 00
Unfunded debt, . . . . .	—	55,819 67	—	859,128 52	178,963 59
TOTAL GROSS DEBT, . . . . .	—	74,819 67	—	4,059,128 52	1,678,463 59
<b>PERMANENT INVESTMENTS.</b>					
Construction, . . . . .	—	\$169,642 70	—	\$5,650,038 40	\$2,801,461 63
Equipment, . . . . .	—	34,235 01	—	910,957 03	248,420 44
Other property, . . . . .	—	—	—	100,372 81	243,170 00
TOTAL PERMANENT INVESTMENTS, . . . . .	—	203,877 71	—	6,661,368 24	3,293,052 07
Cash and cash assets, . . . . .	—	9,087 02	—	249,562 09	283,500 27
TOTAL PROPERTY AND ASSETS, . . . . .	—	212,964 73	—	6,910,930 33	3,576,552 34
<b>REVENUE FOR THE YEAR.</b>					
From local passengers, . . . . .	\$43,204 96	\$12,924 23	\$17,857 30	\$147,270 07	\$113,683 20\$
through passengers, . . . . .	38,068 95	9,597 59	—	57,333 95	87,597 70
express and extra baggage, . . . . .	5,550 00	1,500 00	—	15,674 52	9,115 45
mails, . . . . .	4,574 35	635 73	190 56	9,418 25	7,049 97
other sources passenger department, . . . . .	—	—	3,100 00	—	—
Total earnings passenger department, . . . . .	91,398 26	24,657 55	21,147 86	229,696 79	217,446 32



From local freight, through freight, . . . . .	55,825 60	7,613 25	147 78	317,961 40	139,076 14
other sources freight department, <i>Total earnings freight department,</i> . . . . .	71,324 90	9,299 29	-	230,813 38	185,232 20
<i>TOTAL TRANSPORTATION EARNINGS,</i> . . . . .	15,527 02	-	-	18,146 85	-
From rents for use of road, . . . . .	142,677 52	16,912 54	147 78	-	324,308 34
all other sources, . . . . .	234,075 78	41,570 09	21,295 64	566,921 63	541,754 66
<b>TOTAL INCOME FROM ALL SOURCES,</b> . . . . .	-	-	-	-	-
	828 95	-	1,142 02	7,481 03	10,304 69
	234,904 73	41,570 09	22,437 66	804,099 45	552,059 35
<b>EXPENSES.</b>					
Transportation expenses, . . . . .	\$136,545 43	\$52,819 16	\$13,738 47	\$504,492 79	\$312,608 65
Taxes, . . . . .	7,839 00	2,420 58	32 57	23,902 62	24,844 85
<b>TOTAL EXPENSES,</b> . . . . .	144,384 43	55,239 74	13,771 04	528,395 41	337,453 50
<b>NET INCOME, DIVIDENDS, ETC.</b>					
Net Income, . . . . .	\$90,520 30	\$13,669 65 <i>d</i>	\$8,666 62	\$275,704 04	\$244,130 86 <i>  </i>
Rents, . . . . .	74,102 18	-	-	28,256 35	-
Interest accrued, . . . . .	-	2,537 21	-	238,217 24	101,391 49
Dividends earned, . . . . .	-	-	-	9,230 45	142,739 37
Per cent., . . . . .	-	-	-	-	9.5
Dividends declared, Per cent., . . . . .	-	-	-	-	90,000 00
Balance for the year, . . . . .	-	-	-	-	6.0
Surplus last year, . . . . .	-	16,206 86 <i>d</i>	-	9,230 45	52,739 37
Surplus Sept. 30, 1885, . . . . .	-	5,751 92	-	382,571 36	345,349 38
	-	10,454 94 <i>d</i>	-	391,801 81	398,088 75

\* Operating the Berkshire, Stockbridge &amp; Pittsfield and West Stockbridge railroads.

† The details of the operation of the road are taken from the return made by the trustee for the bondholders.

|| Company's account; amount derived from rent, etc., \$252,464.74; less general expenses, \$8,333.87.

† Leased to J. Gregory Smith et al.

\$ Lessee's account.

*d* Deficit.

	22. — HOUSATONIC OF CONNECTICUT — Con.	23. — MILFORD & WOONSOCKET — Con.	24. — NANTASKET BEACH — Con.	25. — NEW HAVEN & NORTHAMPTON — Con.	26. — NEW LONDON NORTHERN — Con.
<b>MILEAGE, TRAFFIC, ETC.</b>					
Passenger-train mileage, . . . . .	89,577	56,146	27,984	392,056	241,373
Freight-train mileage, . . . . .	101,727	18,583	—	211,218	166,821
<i>Total revenue-train mileage,</i> . . . . .	191,304	74,729	27,984	603,274	408,194
Switching-train mileage, . . . . .	—	6,260	—	64,439	108,194
Other train mileage, . . . . .	8,811	2,391	—	10,871	1,737
<b>TOTAL TRAIN MILEAGE,</b> . . . . .	200,115	83,380	27,984	678,584	518,125
Number season-ticket passengers, . . . . .	—	12,048	17,985	—	26,376
Number local passengers (including season), . . . . .	84,604	74,895	166,656	404,847	265,251
Number through passengers,* . . . . .	41,548	50,213	—	85,606	142,100
<i>Total number of passengers carried,</i> . . . . .	126,152	125,108	166,656	490,453	407,351
Local passenger mileage, . . . . .	1,606,424	424,312	1,155,426	6,277,582	3,569,914
Through passenger mileage,* . . . . .	1,662,735	395,378	—	2,445,777	2,756,159
<i>Total passenger mileage,</i> . . . . .	3,269,159	819,690	1,155,426	8,723,359	6,326,073
Tons of local freight carried, . . . . .	41,010	11,257	—	249,696	120,320
Tons of through freight carried,* . . . . .	64,618	27,504	—	199,018	297,331
<i>Total tons of freight carried,</i> . . . . .	105,628	38,761	—	448,714	417,651
Local freight mileage, . . . . .	1,571,832	68,780	—	12,370,213	4,426,278
Through freight mileage,* . . . . .	3,937,623	258,042	—	11,862,176	15,368,562
<i>Total freight mileage,</i> . . . . .	5,509,455	326,822	—	24,232,389	19,794,840
Av. rate of fare per mile, local passengers, through passengers,* . . . . .	2.69 cents.	3.26 cents.	1.65 cents.	2.34 cents.	3.30 cents.
season-ticket passengers, . . . . .	2.29 "	2.03 "	—	2.34 "	3.18 "
ALL PASSENGERS, . . . . .	2.49 cents.	1.26 "	.70 cents.	—	.72 "
Av. rate of freight per mile, local freight, through freight,* . . . . .	13.00 "	2.75 "	1.55 "	2.34 cents.	3.18 "
ALL FREIGHT, . . . . .	1.81 "	1.11 "	—	2.40 "	3.50 "
	2.30 "	3.60 "	—	2.00 "	1.20 "
		5.17 "	—	2.22 "	1.64 "

## EQUIPMENT.

Number of locomotives, . . . . .	3	4	28	23
passenger cars, . . . . .	4	12	22	13
parlor and sleeping cars, . . . . .	-	-	-	-
mail, baggage, and express cars, . . . . .	-	4	15	14
freight cars (basis 8 wheels), . . . . .	-	4	138	320
other cars, . . . . .	1	5	399	8

## GENERAL INFORMATION, ETC.

Total miles of road operated, . . . . .	19,997	6,933	173.01	121.00
Same in Massachusetts, . . . . .	19,997	6,933	106.62	54.00
Average number of persons employed, . . . . .	48	25	528	450

\* To and from other roads.

	27. — NEW YORK, NEW HAVEN & HARTFORD.	28. — NORWICH & WORCESTER.	29. — PROVIDENCE & WORCESTER.	30. — UNION FREIGHT.	31. — WORCESTER, NASHUA & ROCHESTER.
<b>CAPITAL STOCK.</b>					
Amount paid in, . . . . .	\$15,500,000 00	\$2,604,400 00	\$2,500,000 00	\$300,000 00	\$3,099,800 00
Number of stockholders, . . . . .	3,608	754	799	3	1,224
Stockholders in Massachusetts, . . . . .	504	600	412	3	815
Amount of stock held in Massachusetts, . . . . .	\$2,240,800 00	\$1,986,900 00	\$1,412,500 00	\$300,000 00	\$2,466,100 00
<b>DEBT.</b>					
Funded debt, . . . . .	\$2,000,000 00	\$400,000 00	\$1,242,000 00	—	\$1,662,000 00
Unfunded debt, . . . . .	610,264 06	118,121 21	524,974 11	\$119,688 75	143,005 00
TOTAL GROSS DEBT, . . . . .	2,610,264 06	518,121 21	1,766,974 11	119,688 75	1,805,005 00
<b>PERMANENT INVESTMENTS.</b>					
Construction, . . . . .	\$13,056,686 24	\$3,272,753 55	\$3,500,000 00	\$397,384 57	\$4,138,584 99
Equipment, . . . . .	2,479,326 35	179,750 67	750,000 00	17,000 00	415,336 03
Other property, . . . . .	1,143,315 52	273,107 08	—	13,000 00	—
TOTAL PERMANENT INVESTMENTS, . . . . .	16,679,328 11	3,725,611 30	4,250,000 00	427,384 57	4,553,921 02
Cash and cash assets, . . . . .	4,111,110 95	250,922 88	335,237 62	24,781 25	441,120 19
TOTAL PROPERTY AND ASSETS, . . . . .	20,790,439 06	3,976,534 18	4,585,237 62	452,165 82	4,995,041 21
<b>REVENUE FOR THE YEAR.</b>					
From local passengers, . . . . .	\$2,392,703 93	\$113,548 50	\$372,853 84	—	\$93,061 07
through passengers, . . . . .	1,390,595 91	68,205 50	52,322 24	—	98,021 73
express and extra baggage, . . . . .	266,266 97	16,571 12	19,015 71	—	10,155 67
mails, . . . . .	150,575 45	5,474 90	3,479 03	—	11,553 69
other sources passenger department, . . . . .	461,841 51	—	—	—	2,863 65
Total earnings passenger department, . . . . .	4,361,943 77	203,800 02	447,670 82	—	215,655 81

From local freight, . . . . .	836,905 11	161,775 20	368,078 65	\$68,339 91	86,568 40
through freight, . . . . .	1,568,742 34	309,553 42	226,256 59	4,305 82	305,363 56
other sources freight department, . . . . .	17,946 33	—	—	—	16,384 39
Total earnings freight department, . . . . .	2,423,593 78	471,328 62	594,335 24	72,645 73	408,316 35
TOTAL TRANSPORTATION EARNINGS, . . . . .	6,785,537 55	675,128 64	1,042,006 06	72,645 73	623,972 16
From rents for use of road, . . . . .	—	—	—	—	—
all other sources, . . . . .	110,287 20	75,353 13	35,160 56	1,395 22	9,102 23
TOTAL INCOME FROM ALL SOURCES, . . . . .	6,895,824 75	750,481 77	1,077,166 62	74,040 95	633,074 39
EXPENSES.					
Transportation expenses, . . . . .	\$4,312,969 09	\$381,128 14	\$710,179 94	\$44,152 53	\$423,590 77
Taxes, . . . . .	311,017 44	46,860 12	45,478 77	2,153 25	17,516 66
TOTAL EXPENSES, . . . . .	4,623,986 53	427,988 26	755,658 71	46,305 78	441,107 43
NET INCOME, DIVIDENDS, ETC.					
Net income, . . . . .	\$2,271,838 22	\$322,493 51	\$321,507 91	\$27,735 17	\$191,966 96
Rents, . . . . .	420,970 00	40,050 00	—	—	—
Interest accrued, . . . . .	80,000 00	24,395 86	90,974 82	5,587 63	88,829 48
Dividends earned, . . . . .	1,770,868 22	258,047 65	230,533 09	22,147 54	103,137 48
Per cent., . . . . .	11.4	9.9	9.2	7.4	3.3
Dividends declared, . . . . .	1,550,000 00	233,802 00	150,000 00	21,000 00	78,579 00
Per cent., . . . . .	10.0	9.0	6.0	7.0	3.0*
Balance for the year, . . . . .	220,868 22	24,245 65	80,533 09	1,147 54	24,558 48
Surplus last year, . . . . .	2,459,306 78	829,767 32	157,197 33	31,329 53	65,677 73
Surplus Sept. 30, 1885, . . . . .	2,680,175 00	854,012 97	318,263 51†	32,477 07	90,236 21

\* On 26,193 shares owned by the stockholders. No dividend was paid on 4,805 shares owned by the company.

† Includes "Improvement Fund" of \$80,533.09.



	27.—NEW YORK, NEW HAVEN & HARTFORD—Con.	28.—NORWICH & WORCESTER—Con.	29.—PROVIDENCE & WORCESTER—Con.	30.—UNION FREIGHT—Con.	31.—WORCESTER, NASHUA & ROCHESTER—Con.
<b>MILEAGE, TRAFFIC, ETC.</b>					
Passenger-train mileage, . . . . .	2,526,616	175,848	286,631	—	222,623
Freight-train mileage, . . . . .	1,314,437	162,752	244,729	17,740	216,114
Total revenue-train mileage, . . . . .	3,841,053	338,600	531,360	17,740	438,737
Switching-train mileage, . . . . .	753,223	145,717	184,872	—	89,337
Other train mileage, . . . . .	209,076	4,650	23,015	—	16,234
TOTAL TRAIN MILEAGE, . . . . .	4,803,352	488,967	739,247	17,740	544,308
Number season-ticket passengers, . . . . .	2,378,302	37,560	110,136	—	71,257
Number local passengers (including season), . . . . .	6,904,130	409,699	2,411,904	—	283,553
Number through passengers,* . . . . .	861,445	97,534	149,714	—	147,589
Total number of passengers carried, . . . . .	7,765,575	507,233	2,561,618	—	431,142
Local passenger mileage, . . . . .	144,683,509	5,189,475	18,204,293	—	3,439,685
Through passenger mileage,* . . . . .	63,993,368	2,817,746	2,225,006	—	3,604,918
Total passenger mileage, . . . . .	208,676,877	8,007,221	20,429,299	—	7,044,603
Tons of local freight carried, . . . . .	704,641	196,011	457,283	219,661	65,758
Tons of through freight carried,* . . . . .	1,443,822	350,048	371,578	11,722	429,806
Total tons of freight carried, . . . . .	2,148,463	546,059	828,861	231,383	495,564
Local freight mileage, . . . . .	23,030,538	7,629,465	12,402,341	302,033	2,429,251
Through freight mileage,* . . . . .	101,137,611	11,281,479	11,759,477	17,383	14,588,087
Total freight mileage, . . . . .	124,168,149	18,910,944	24,161,818	319,616	17,017,338
Average rate of fare per mile, local passengers through passengers,* . . . . .	2 56 cents.	2.50 cents.	2.18 cents.	—	3.16 cents.
season-ticket passengers, . . . . .	2 31 "	2.40 "	2.35 "	—	2.72 "
ALL PASSENGERS, . . . . .	.58 "	.90 "	.705 "	—	.89 "
Average rate of freight per mile, local freight, through freight,* . . . . .	3.69 "	2.12 "	2.96 "	2.26 cents.	3.56 "
ALL FREIGHT, . . . . .	1 56 "	2.70 "	1.92 "	2.44 "	2.10 "
	1.96 "	2.40 "	2.45 "	2.27 "	2.30 "

## EQUIPMENT.

Number of locomotives, . . .	128	17	37	4	24
passenger cars, . . .	266	10	40	-	19
parlor and sleeping cars, . . .	38	4†	-	-	3
mail, baggage, and express cars, . . .	87	3	13	-	9
freight cars (basis 8 wheels), . . .	2,199	556	1,203	-	417
other cars, . . .	50	9	6	-	-

## GENERAL INFORMATION, ETC.

Total miles of road operated, . . .	265.37	66.48	50.41	2.431	94.48
Same in Massachusetts, . . .	5.87	18.50	26.01	2.431	39.46
Average number of persons employed, . . .	4,236	428	800	38	400

\* To and from other roads.

† Combination cars.

NARROW GAUGE ROADS.	32.—BOSTON, REVERE BEACH & LYNN.	33.—GRAFTON CEN- TRE.	34.—MARTHA'S VINEYARD.	35.—NANTUCKET.	36.—WORCHESTER & SHREWSBURY.
<b>CAPITAL STOCK.</b>					
Amount paid in, . . . . .	\$585,800 00	\$29,830 00	\$40,000 00	\$95,000 00	\$36,825 00
Number of stockholders, . . . .	355	56	24	75	10
Stockholders in Massachusetts, . .	332	56	22	66	10
Amount of stock held in Massachusetts, .	\$536,700 00	\$29,830 00	\$36,400 00	\$83,100 00	\$36,825 00
<b>DEBT.</b>					
Funded debt, . . . . .	\$350,000 00	\$13,000 00	\$40,000 00	\$59,500 00	\$22,000 00
Unfunded debt, . . . . .	13,897 92	7,257 71	292 00	9,379 88	3,343 15
<b>TOTAL GROSS DEBT, . . . . .</b>	<b>363,897 92</b>	<b>20,257 71</b>	<b>40,292 00</b>	<b>68,879 88</b>	<b>25,343 15</b>
<b>PERMANENT INVESTMENTS.</b>					
Construction, . . . . .	\$614,035 23	\$39,245 98	\$91,512 09	\$156,904 67	\$39,273 38
Equipment, . . . . .	169,060 57	5,025 69	14,031 00	14,413 18	27,982 54
Other property, . . . . .	189,971 22	-	3,501 63	-	-
<b>TOTAL PERMANENT INVESTMENTS, . . .</b>	<b>973,067 02</b>	<b>44,271 67</b>	<b>109,044 72</b>	<b>171,317 85</b>	<b>67,255 92</b>
Cash and cash assets, . . . . .	17,398 51	671 78	419 67	1,082 95	908 06
<b>TOTAL PROPERTY AND ASSETS, . . . .</b>	<b>990,465 53</b>	<b>44,943 45</b>	<b>109,464 39</b>	<b>172,400 80</b>	<b>68,163 98</b>
<b>REVENUE FOR THE YEAR.</b>					
From local passengers, . . . . .	\$180,925 77	\$4,576 11	\$4,923 94	\$7,841 80	\$19,583 90
through passengers, . . . . .	-	-	-	-	-
express and extra baggage, . . . .	-	419 38	22 00	59 34	-
mails, . . . . .	-	270 00	200 00	1,131 54	-
all other sources, . . . . .	14,838 32	1,189 36	984 90	9,032 68	1,265 79
<b>TOTAL INCOME FROM ALL SOURCES, . .</b>	<b>195,764 09</b>	<b>6,454 85</b>	<b>6,130 84</b>		<b>20,849 69</b>

EXPENSES.					
Transportation expenses, . . . . .		\$114,251 05	\$5,834 46	\$3,953 45	\$3,716 94
Taxes, . . . . .		8,852 44	—	29 21	135 75
TOTAL EXPENSES, . . . . .		123,103 49	5,834 46	3,982 66	3,852 69
NET INCOME, DIVIDENDS, ETC.					
Net income, . . . . .		\$72,660 60	\$620 39	\$2,148 18	\$2,419 77 <i>d</i>
Interest accrued, . . . . .		—	—	—	—
Dividends declared, . . . . .		21,047 58	1,139 75	2,011 09	1,288 12
Per cent., . . . . .		35,148 00	—	—	—
Balance for the year, . . . . .		6.0	—	—	—
Surplus last year, . . . . .		16,465 02	519 36 <i>d</i>	137 09	3,707 89 <i>d</i>
Surplus Sept. 30, 1885, . . . . .		24,302 59	4,624 90 <i>d</i>	29,035 30	9,703 72
		40,767 61	5,144 26 <i>d</i>	29,172 39	5,995 83

*d* Deficit.

NARROW GAUGE ROADS.	32.—BOSTON, REVERE BEACH & LYNN—Con.	33.—GRAFTON CENTRE—Con.	34.—MARTHA'S VINEYARD—Con.	35.—NANTUCKET—Con.	36.—WORCESTER & SHREWSBURY—Con.
<b>MILEAGE, TRAFFIC, ETC.</b>					
Passenger-train mileage, . . . .	145,252	14,085	6,624	15,100	33,673
Other train mileage, . . . .	562	—	—	—	—
<b>TOTAL TRAIN MILEAGE.</b> . . . .	145,814	14,085	6,624	15,100	33,673
Number season-ticket passengers, . . .	250,442	—	—	—	14,352
Number local passengers (including season), . . . .	1,729,999	37,173	22,908	28,014	282,378
Number through passengers,* . . . .	—	—	—	—	—
<i>Total number of passengers carried,</i> . . .	1,729,999	37,173	22,908	28,014	282,378
Local passenger mileage, . . . .	9,133,166	111,519	190,824	308,154	762,420
Through passenger mileage,* . . . .	—	—	—	—	—
<i>Total passenger mileage,</i> . . . .	9,133,166	111,519	190,824	308,154	762,420
<b>EQUIPMENT.</b>					
Number of locomotives, . . . .	6	1	1	2	3
passenger cars, . . . .	31	1	3	4	6
mail, baggage, and express cars, . . .	—	—	1	—	—
freight cars (basis 8 wheels), . . .	4	—	—	4	—
other cars, . . . .	14	—	—	—	4
<b>GENERAL INFORMATION, ETC.</b>					
Total miles of road operated, . . . .	8.80	3.00	8.78	11.16	2.70
Same in Massachusetts, . . . .	8.80	3.00	8.78	11.16	2.70
Average number of persons employed, . .	102	8	10	15	7

\* To and from other roads.



LEASED ROADS.*	37.—ATTLEBOROUGH BRANCH. 1	38.—BERKSHIRE. 2	39.—EASTERN. 3	40.—FALL RIVER. 4	41.—HOLYOKE & WESTFIELD. 5
<b>LIABILITIES.</b>					
Capital stock, . . . . .	\$131,700 00	\$600,000 00	\$4,997,600 00	\$200,000 00	\$260,000 00
Funded debt, . . . . .	—	—	13,657,320 62	200,000 00	260,000 00
Unfunded debt, . . . . .	160 50	245 07	819,187 37	66,115 22	—
Surplus Sept. 30, 1885, . . . . .	675 96	14,227 97	351,668 36	22,170 53 <i>d</i>	13,037 43
<b>TOTAL LIABILITIES, . . . . .</b>	<b>132,536 46</b>	<b>614,473 04</b>	<b>19,825,776 35</b>	<b>466,115 22</b>	<b>533,037 43</b>
<b>ASSETS.</b>					
Construction, . . . . .	\$132,416 48	\$600,000 00	\$14,497,655 26	\$443,944 69	\$522,268 89
Other property, . . . . .	1,000 00	6,000 00	4,515,681 25	—	—
Cash and cash assets, . . . . .	119 98	8,473 04	812,439 84	—	10,768 54
<b>TOTAL ASSETS, . . . . .</b>	<b>132,536 46</b>	<b>614,473 04</b>	<b>19,825,776 35</b>	<b>443,944 69</b>	<b>533,037 43</b>
<b>INCOME, EXPENSES, ETC., FOR THE YEAR.</b>					
Total income from all sources, . . . . .	\$9,259 00	\$42,439 68	\$1,016,754 92	\$10,835 88	\$28,421 21
Total expenses, . . . . .	—	10,959 93	6,233 18	263 20	1,080 40
Net income, . . . . .	9,259 00	31,479 75	1,010,521 74	10,072 63	27,340 81
Interest accrued, . . . . .	—	—	872,602 27	10,000 00	17,600 00
Dividends declared, . . . . .	9,219 00	31,473 00	—	—	10,400 00
Per cent., . . . . .	7.0	5.25	—	—	4.0
Balance for the year, . . . . .	40 00	6 75	137,919 47	72 63	659 19 <i>d</i>

\* Leased to and operated by the <sup>1</sup>Boston and Providence, <sup>2</sup>Housatonic of Connecticut, <sup>3</sup>Boston and Maine, <sup>4</sup>Old Colony, <sup>5</sup>New Haven and Northampton.

*d* Deficit.

LEASED ROADS.		42.—LOWELL & ANDOVER. 1	43.—LOWELL & FRAMINGHAM. 2	44.—MILFORD, FRANKLIN & PROVIDENCE. †	45.—MONADNOCK. 3
LIABILITIES.					
Capital stock, . . . . .	• • • • •	\$500,000 00	\$746,700 00	\$100,000 00	\$205,400 00
Funded debt, . . . . .	• • • • •	180,000 00	500,000 00	—	59,500 00
Unfunded debt, . . . . .	• • • • •	—	245 11	43 50	3,002 00
Surplus Sept. 30, 1885, . . . . .	• • • • •	103,640 67	45 11 <sup>d</sup>	—	106,111 08
<b>TOTAL LIABILITIES,</b> . . . . .	• • • • •	783,640 67	1,246,945 11	100,043 50	374,013 08
ASSETS.					
Construction, . . . . .	• • • • •	\$754,715 94	\$1,147,164 00	\$99,551 20	\$367,701 26
Other property, . . . . .	• • • • •	—	99,736 00	—	3,090 00
Cash and cash assets, . . . . .	• • • • •	28,924 73	—	492 30	3,221 82
<b>TOTAL ASSETS,</b> . . . . .	• • • • •	783,640 67	1,246,900 00	100,043 50	374,013 08
INCOME, EXPENSES, ETC., FOR THE YEAR.					
Total income from all sources, . . . . .	• • • • •	\$53,180 42	†	†	\$12,500 00
Total expenses, . . . . .	• • • • •	141 20	—	—	58 15
Net income, . . . . .	• • • • •	53,039 22	—	—	12,441 85
Interest accrued, . . . . .	• • • • •	10,800 00	—	—	3,149 48
Dividends declared, . . . . .	• • • • •	35,000 00	—	—	—
Per cent., . . . . .	• • • • •	7.0	—	—	—
<b>Balance for the year,</b> . . . . .	• • • • •	7,239 22	—	—	9,292 37

\* Leased to and operated by the <sup>1</sup>Boston & Maine, <sup>2</sup>Old Colony, <sup>3</sup>Cheshire. † Disbursements made by the Old Colony R. R. Co. under an agreement for consolidation. ‡ Operated by the Milford and Woonsocket R. R. Co. upon terms not yet agreed upon. d Deficit.

LEASED ROADS.*	46.—NASHUA & LOWELL.1	47.—NASHUA, ACTON & BOSTON.2	48.—NEWBURYPORT CITY.3	49.—NORTH BROOKFIELD.4	50.—PITTSFIELD & NORTH ADAMS.5
<b>LIABILITIES.</b>					
Capital stock, . . . . .	\$300,000 00	\$500,000 00	\$97,000 00	\$100,000 00	\$450,000 00
Funded debt, . . . . .	300,000 00	500,000 00	25,000 00	—	—
Unfunded debt, . . . . .	15,225 00	431,499 98	—	—	—
Surplus Sept. 30, 1885, . . . . .	119,754 96	374,468 78 <sup>d</sup>	16,027 73	5,720 64	—
<b>TOTAL LIABILITIES, . . . . .</b>	<b>1,234,979 96</b>	<b>1,431,499 98</b>	<b>138,027 73</b>	<b>105,720 64</b>	<b>450,000 00</b>
<b>ASSETS.</b>					
Construction, . . . . .	\$691,292 07	\$1,057,031 20	\$122,128 33	\$105,456 79	\$438,752 57
Other property, . . . . .	218,242 95	—	—	75 00	11,247 43
Cash and cash assets, . . . . .	325,444 94	—	15,899 40	188 85	—
<b>TOTAL ASSETS, . . . . .</b>	<b>1,234,979 96</b>	<b>1,057,031 20</b>	<b>138,027 73</b>	<b>105,720 64</b>	<b>450,000 00</b>
<b>INCOME, EXPENSES, ETC., FOR THE YEAR.</b>					
Total income from all sources, . . . . .	\$82,258 71	\$8,250 00	\$6,711 25	\$2,231 42	\$22,500 00
Total expenses, . . . . .	2,347 40	—	1,132 79	122 25	—
Net income, . . . . .	79,911 31	8,250 00	5,578 46	2,109 17	22,500 00
Interest accrued, . . . . .	17,732 98	30,907 43	1,750 00	—	—
Dividends declared, . . . . .	56,000 00	—	2,910 00	2,000 00	22,500 00
Per cent., . . . . .	7.0	—	3.0	2.0	5.0
Balance for the year, . . . . .	6,178 33	22,657 43 <sup>d</sup>	918 46	109 17	—

\* Leased to <sup>1</sup> Boston & Lowell, <sup>2</sup> Concord of N. H. and operated by the Boston & Lowell, <sup>3</sup> Eastern, and operated by the Boston & Maine, <sup>4</sup>, <sup>5</sup> Boston & Albany.  
<sup>d</sup> Deficit.

LEASED ROADS.*		51.—RHODE ISLAND & MASSACHUSETTS.1	52.—PROVIDENCE, WEBSTER & SPRINGFIELD.2	53.—SPENCER.2	54.—SPRINGFIELD & NEW LONDON.3	55.—STOCKBRIDGE & PITTSFIELD.4
LIABILITIES.						
Capital stock,	.	\$100,000 00	\$110,000 00	\$50,000 00	\$198,145 00	\$448,700 00
Funded debt,	.	—	—	4,500 00	—	—
Unfunded debt,	.	19 00	50,246 07	—	139 50	509 03
Surplus Sept. 30, 1885,	.	17,225 43	408 38	12,696 74	2,056 31	2,772 83
TOTAL LIABILITIES,	.	117,244 43	160,654 45	67,196 74	200,340 81	451,981 86
ASSETS.						
Construction,	.	\$112,321 13	\$160,246 07	\$65,749 43	\$187,805 52	\$448,700 00
Other property,	.	—	—	—	9,998 00	2,550 00
Cash and cash assets,	.	4,923 30	408 38	1,447 31	2,537 29	731 86
TOTAL ASSETS,	.	117,244 43	160,654 45	67,196 74	200,340 81	451,981 86
INCOME, EXPENSES, ETC., FOR THE YEAR.						
Total income from all sources,	.	\$10,000 00	\$4,674 54	\$2,717 03	\$5,517 00	\$31,647 00
Total expenses,	.	—	497 70	315 28	755 37	8,134 65
Net income,	.	10,000 00	4,176 84	2,401 75	4,761 63	23,512 35
Interest accrued,	.	—	3,768 46	279 90	—	76 16
Dividends declared,	.	10,000 00	—	1,000 00	4,732 75	23,460 40
Per cent.,	.	10.0	—	2.0	2.75	5.23
Balance for the year,	.	—	408 38	1,121 85	28 88	24 21d

\* These roads are leased to and operated by the 1, 3 New York & New England, 2 Boston & Albany, 4 Housatonic of Connecticut.

d Deficit.

LEASED ROADS.*		56.—STONY BROOK.1	57.—VERMONT & MASSACHUSETTS.2	58.—WARE RIVER.3	59.—WEST AMESBURY BRANCH.4	60.—WEST STOCKBRIDGE.5
LIABILITIES.						
Capital stock,	.	\$300,000 00	\$3,193,000 00	\$750,000 00	\$57,000 00	\$39,600 00
Funded debt,	.	—	1,000,300 00	—	57,000 00	—
Unfunded debt,	.	—	10,580 55	365,163 82	79 00	—
Surplus Sept. 30, 1885,	.	14 48 <sup>d</sup>	142,002 28	—	191 87	1,167 61
TOTAL LIABILITIES,	.	300,000 00	4,345,882 83	1,115,163 82	114,270 87	40,767 61
ASSETS.						
Construction,	.	\$276,601 19	\$3,288,328 01	\$1,115,163 82	114,000 00	39,600 00
Other property,	.	21,492 38	472,507 65	—	—	400 00
Cash and cash assets,	.	1,891 95	585,047 17	—	270 87	767 61
TOTAL ASSETS,	.	299,985 52	4,345,882 83	1,115,163 82	114,270 87	40,767 61
INCOME, EXPENSES, ETC., FOR THE YEAR.						
Total income from all sources,	.	\$20,641 58	\$186,000 00	\$52,500 00	\$5,700 00	\$1,897 73
Total expenses,	.	273 87	3,000 00	—	541 52	358 31
Net income,	.	20,367 71	183,000 00	52,500 00	5,158 48	1,539 42
Interest accrued,	.	—	†	—	3,990 00	—
Dividends declared,	.	21,750 00	183,000 00	52,500 00	1,140 00	1,485 00
Per cent.,	.	7.25	6.0	7.0	2.0	3.75
Balance for the year,	.	1,382 29 <sup>d</sup>	—	—	28 48	54 42

\* These roads are leased to and operated by the <sup>1</sup> Boston & Lowell, <sup>2</sup> Fitchburg, <sup>3</sup> Boston & Albany, <sup>5</sup> Housatonic of Connecticut.

† Interest paid by Fitchburg Railroad Company.

<sup>d</sup> Deficit.



	61. — TROY & GREENFIELD.*	62. — CENTRAL MASSACHUSETTS.†	63. — CHELSEA BEACH.‡	64. — DANVERS. 2‡	65. — DORCHESTER & MILTON. 3‡	66. — HORN POND BRANCH. 4.
<b>LIABILITIES.</b>						
Capital stock, . . . . .	—	\$7,252,714 00	\$21,000 00	\$67,500 00	\$73,340 00	\$2,000 00
Funded debt, . . . . .	—	—	—	150,000 00	—	—
Unfunded debt, . . . . .	—	—	17,310 52	26,956 02	58,448 07	—
Surplus Sept. 30, 1885, . . . . .	—	—	—	—	4,584 70	13,238 46
<b>TOTAL LIABILITIES, . . . . .</b>	—	7,252,714 00	38,310 52	244,456 02	136,372 77	15,238 46
<b>ASSETS.</b>						
Construction, . . . . .	—	—†	\$38,310 52	\$244,456 02	\$136,372 77	\$15,238 46
Other property, . . . . .	—	—	—	—	—	—
Cash and cash assets, . . . . .	—	—	—	—	—	—
<b>TOTAL ASSETS, . . . . .</b>	—	—	38,310 52	244,456 02	136,372 77	15,238 46
<b>INCOME, EXPENSES, ETC., FOR THE YEAR.</b>						
Total income from all sources, . . . . .	—\$	—†	—	—	—	—
Total expenses, . . . . .	—	—	—	—	—	—
Net income, . . . . .	—	—	—	—	—	—

\* This road is operated by connecting railroads, under contract with the State.

† Road in the hands of the committee of the bondholders. Not in operation the past fiscal year.

‡ These roads are virtually owned by the <sup>1</sup> Eastern and operated by the Boston & Maine, <sup>2</sup> Boston & Maine, <sup>3</sup> Old Colony; and their earnings and expenses are included in the returns of those roads. <sup>4</sup> Operated by the Boston & Lowell.

	67.—LANCASTER.*	68.—NEWBURYPORT.†	69.—NEW YORK & BOSTON INLAND.	70.—OCEAN TERMINAL.‡
<b>LIABILITIES.</b>				
Capital stock, . . . . .	—	\$220,340 02	\$127,720 00	\$2,000 00
Funded debt, . . . . .	—	300,000 00	—	—
Unfunded debt, . . . . .	—	77,046 31	17,748 12	—
Surplus Sept. 30, 1885, . . . . .	—	—	—	—
<b>TOTAL LIABILITIES, . . . . .</b>	—	597,386 33	145,468 12	2,000 00
<b>ASSETS.</b>				
Construction, . . . . .	—	\$597,386 33	\$145,376 81	\$1,669 28
Other property, . . . . .	—	—	—	—
Cash and cash assets, . . . . .	—	—	91 31	330 72
<b>TOTAL ASSETS, . . . . .</b>	—	597,386 33	145,468 12	2,000 00

\* Road sold under foreclosure of a mortgage.

† This road is virtually owned by the Boston & Maine, and its earnings and expenses are included in the return of that road.

‡ Obtained a certificate of incorporation but has not yet commenced the construction of its road.



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TABULATED COMPARATIVE RESULTS

OF THE

CONDITION AND OPERATION

OF SEVERAL OF THE

RAILROAD CORPORATIONS OF THE STATE.

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COMPILED FROM REPORTS.

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## TABULATED COMPARATIVE RESULTS OF RAILROAD CORPORATIONS.

RAILROADS.	STOCK, DEBT AND COST PER MILE OF ROAD OWNED.					76.—Total Permanent Investments.
	71.—Stock paid in.	72.—Net Debt.	73.—Total Stock and Net Debt.	74.—Construction.	75.—Equipment.	
Boston & Albany, . . . . .	\$66,339 39	\$30,263 53	\$96,602 92	\$83,648 91	\$10,433 20	\$100,116 35
Boston & Lowell, . . . . .	48,372 56	39,252 60	87,624 16	70,788 56	12,658 74	98,746 47
Boston & Maine, . . . . .	55,816 73	26,335 91	82,152 64	77,588 21	10,549 84	96,928 82
Boston & Providence, . . . . .	62,743 13	11,444 45	74,187 58	73,549 40	3,253 23	81,280 29
Fitchburg, . . . . .	40,076 57	28,034 30	68,110 87	42,499 11	20,159 12	71,067 74
New York & New England, . . . . .	61,393 01	53,417 51	114,810 52	99,543 17	11,651 39	112,680 85
Old Colony, . . . . .	25,382 82	22,187 47	47,570 29	39,849 27	5,067 29	49,971 59
Eastern, . . . . .	42,238 00	115 484 01	157,722 01	122,529 20	12,236 55	160,594 19
Average, . . . . .	\$18,264 46	\$38,469 66	\$86,734 12	\$73,033 83	\$10,030 22	\$90,112 82
Cheshire, . . . . .	\$40,158 52	\$9,299 59	\$49,458 11	\$44,671 18	\$6,010 19	\$50,681 37
Connecticut River, . . . . .	42,435 09	2,323 53	44,758 62	53,484 70	6,980 62	62,248 85
New Haven & Northampton, . . . . .	19,316 84	29,914 14	49,230 98	44,366 22	7,153 18	52,307 58
New York, New Haven & Hartford, . . . . .	110,163 47	—	110,163 47	92,798 05	17,621 37	118,545 33
Norwich & Worcester, . . . . .	39,175 69	4,019 23	43,194 92	49,229 14	2,703 83	56,011 08
Providence & Worcester, . . . . .	49,593 33	28,401 83	77,995 16	69,430 67	14,878 00	84,308 67
Worcester, Nashua & Rochester, . . . . .	32,805 88	14,435 70	47,241 58	43,803 82	4,396 02	48,199 84
Average, . . . . .	\$52,110 75	\$12,397 56	\$64,508 31	\$59,661 52	\$9,250 46	\$71,429 91
Average 15 Roads, . . . . .	\$49,325 61	\$31,426 27	\$80,751 88	\$69,443 11	\$7,823 20	\$85,137 20



*Tabulated Comparative Results of Railroad Corporations — Continued.*

RAILROADS.	EARNINGS AND EXPENSES PER MILE ROAD OPERATED.			EARNINGS AND EXP. PER TOTAL REVENUE TRAIN-MILE.		
	77. — Total Transportation Earnings.	78. — Operating Expenses.	79. — Net Earnings.	80. — Total Transportation Earnings.	81. — Operating Expenses.	82. — Net Earnings.
Boston & Albany, . . . . .	\$18,751 55	\$12,333 57	\$6,417 98	\$1,406	\$0,925	\$0,481
Boston & Lowell, . . . . .	5,727 21	3,804 50	1,922 71	1,199	.796	.403
Boston & Maine, . . . . .	12,740 14	8,105 61	4,634 53	1,541	.980	.561
Boston & Providence, . . . . .	24,430 45	17,569 59	6,860 86	1,715	1,233	.482
Fitchburg, . . . . .	12,241 14	8,826 44	3,414 70	1,324	.955	.369
New York & New England, . . . . .	8,255 32	6,009 13	2,246 19	1,466	1,067	.399
Old Colony, . . . . .	8,891 75	6,172 31	2,719 44	1,723	1,196	.527
Average, . . . . .	\$10,764 06	\$7,282 19	\$3,481 87	\$1,450	\$0,981	\$0,469
Cheshire, . . . . .	\$8,493 42	\$5,148 51	\$3,344 91	\$1,087	\$0,659	\$0,428
Connecticut River, . . . . .	10,398 18	6,748 04	3,650 14	1,691	1,097	.594
New Haven & Northampton, . . . . .	4,604 46	2,915 97	1,688 49	1,321	.837	.484
New York, New Haven & Hartford, . . . . .	25,570 10	16,252 66	9,317 44	1,766	1,123	.643
Norwich & Worcester, . . . . .	10,155 36	5,732 97	4,422 39	1,991	1,124	.867
Providence & Worcester, . . . . .	20,670 62	14,088 07	6,582 55	1,962	1,337	.625
Worcester, Nashua & Rochester, . . . . .	6,604 28	4,483 39	2,120 89	1,421	.965	.456
Average, . . . . .	\$14,764 33	\$9,410 65	\$5,353 68	\$1,675	\$1,068	\$0,607
Average 14 Roads, . . . . .	\$11,646 43	\$7,751 76	\$3,894 67	\$1,506	\$1,003	\$0,504

## Tabulated Comparative Results of Railroad Corporations — Continued.

RAILROADS.	EXPENSES PER TOTAL TRAIN MILE.							
	\$3.—Repairs of Road.*	\$4.—New Rails.	\$5.—Repairs of Bridges.	\$6.—Repairs of Locomotives.	\$7.—Fuel.	\$8.—Oil and Waste.	\$9.—Repairs of Passenger, Baggage and Mail Cars.†	\$9.—Repairs of Freight Cars.†
Boston & Albany, . . . . .	\$0.1025	\$0.0279	\$0.0258	\$0.0633	\$0.1015	\$0.0097	\$0.0659	\$0.0848
Boston & Lowell, . . . . .	.1141	.0065	.0093	.0322	.0971	.0079	.0552	.0891
Boston & Maine, . . . . .	.0896	.0169	.0330	.0692	.0913	.0059	.0744	.1112
Boston & Providence, . . . . .	.1649	.0348	.0424	.0774	.0094	.0173	.0678	.1377
Fitchburg, . . . . .	.0848	.0091	.0059	.0438	.1030	.0034	.0770	.1421
New York & New England, . . . . .	.1225	.0079	.0073	.0739	.1040	.0057	.0690	.0971
Old Colony, . . . . .	.1489	.0188	.0174	.0492	.0750	.0079	.1029	.1683
Average, . . . . .	\$0.1110	\$0.0170	\$0.0198	\$0.0571	\$0.0954	\$0.0076	\$0.0733	\$0.1055
Cheshire, . . . . .	\$0.0631	\$0.0019	\$0.0030	\$0.0320	\$0.1454	\$0.0093	\$0.0730	\$0.0419
Connecticut River, . . . . .	.2113	.0012	.0074	.0412	.1097	.0060	.0506	.1800
New Haven & Northampton, . . . . .	.1310	.0401	.0045	.0541	.0924	.0112	.0404	.1576
New York, New Haven & Hartford, . . . . .	.1524	.0020	.0508	.0390	.0775	.0085	.1025	.0849
Norwich & Worcester, . . . . .	.0673	.0268	.0024	.0571	.0859	.0041	.0714	.2254
Providence & Worcester, . . . . .	.1137	.0169	.0326	.0417	.0925	.0058	.1038	.0971
Worcester, Nashua & Rochester, . . . . .	.1272	.0344	.0110	.0887	.1114	.0059	.0490	.0696
Average, . . . . .	\$0.1389	\$0.0098	\$0.0338	\$0.0444	\$0.0835	\$0.0079	\$0.0872	\$0.0990
Average 14 Roads, . . . . .	\$0.1182	\$0.0151	\$0.0234	\$0.0539	\$0.0939	\$0.0077	\$0.0770	\$0.1040

\* Including cost of new ties.

† Per passenger-train mile.

‡ Per freight-train mile.

Tabulated Comparative Results of Railroad Corporations — Continued.

RAILROADS.	REPAIRS.			AVERAGES, ETC.			
	91. — Per Locomotive.	92. — Per Passenger, Baggage and Mail Car.	93. — Per Freight Car.	94. — Per Passenger. Average Distance travelled.	95. — Per Ton of Freight; Average Distance carried.	96. — Average No. of Passengers per Train Mile.	97. — Average No. of Tons of Freight per Train Mile.
Boston & Albany, . . . . .	\$1,509 14	\$477 36	\$43 49	18.8	115.7	84	127
Boston & Lowell, . . . . .	774 05	399 85	38 35	13.4	55.2	43	86
Boston & Maine, . . . . .	1,645 54	480 68	37 35	13 1	53.7	74	90
Boston & Providence, . . . . .	1,395 50	279 72	37 23	9.8	29.5	76	87
Fitchburg, . . . . .	1,100 80	553 60	39 79	14.1	75.0	48	163
New York & New England, . . . . .	1,362 42	425 69	25 47	12.7	62.7	49	115
Old Colony, . . . . .	1,305 87	618 82	52 59	14.9	35.5	73	83
Average, . . . . .	\$1,326 55	\$464 67	\$39 14	14.1	70.1	65	113
Cheshire, . . . . .	\$574 35	\$338 73	\$29 51	29.5	55.0	31	81
Connecticut River, . . . . .	765 86	349 08	49 23	10.7	24.9	44	104
New Haven & Northampton, . . . . .	1,312 49	428 20	61 95	17.8	54.0	22	115
New York, New Haven & Hartford, . . . . .	1,462 30	662 75	49 59	26.9	57.8	83	95
Norwich & Worcester, . . . . .	1,641 23	698 47	65 15	15.8	34.6	45	116
Providence & Worcester, . . . . .	879 97	562 07	19 68	7.9	29.1	71	99
Worcester, Nashua & Rochester, . . . . .	2,010 82	352 67	36 05	16.3	34.3	32	79
Average, . . . . .	\$1,256 55	\$596 10	\$43 41	20.5	45.0	66	95
Average 14 Roads, . . . . .	\$1,311 19	\$497 71	\$40 01	15.4	63.0	66	109

Tabulated Comparative Results of Railroad Corporations — Concluded.

RAILROADS.	98. — Passenger Earnings.	99. — Freight Earnings.	100. — Total Transportation Earnings.	101. — Operating Expenses.	102. — Net Earnings.	103. — Per cent. Operating Expenses to Trans. Earnings.
Boston & Albany, . . . . .	\$3,442,543 78	\$3,765,928 74	\$7,208,472 52	\$4,741,270 94	\$2,467,201 58	66
Boston & Lowell, . . . . .	1,776,459 14	2,172,794 69	3,949,253 83	2,623,434 20	1,325,819 63	66
Boston & Maine, . . . . .	3,796,694 73	2,435,401 16	6,232,095 89	3,965,022 49	2,267,073 43	64
Boston & Providence, . . . . .	1,061,994 78	593,217 10	1,655,211 88	1,190,374 71	464,837 17	72
Fitchburg, . . . . .	1,075,266 25	1,712,162 33	2,787,428 58	2,009,867 35	777,561 23	72
New York & New England, . . . . .	1,284,225 37	1,839,999 25	3,124,224 62	2,274,155 95	850,068 67	73
Old Colony, . . . . .	2,406,466 05	1,764,389 03	4,170,855 08	2,985,244 26	1,275,610 82	69
Cheshire, . . . . .	\$176,082 44	\$367,581 68	\$543,664 12	\$329,556 32	\$214,107 80	61
Connecticut River, . . . . .	383,532 73	446,761 51	830,294 24	538,831 02	291,463 22	65
New Haven & Northampton, . . . . .	229,696 79	566,921 63	796,618 42	504,492 79	292,125 63	63
New York, New Haven & Hartford, . . . . .	4,361,943 77	2,423,593 78	6,785,537 55	4,312,969 09	2,472,568 46	64
Norwich & Worcester, . . . . .	203,800 02	471,328 62	675,128 64	381,128 14	294,000 50	57
Providence & Worcester, . . . . .	447,670 82	594,335 24	1,042,006 06	710,179 94	331,826 12	68
Worcester, Nashua & Rochester, . . . . .	215,655 81	408,316 35	623,972 16	423,590 77	200,381 39	68

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COMPARISON OF RETURNS

1884 with 1885,

AND

SUMMARY TAKEN FROM RETURNS

OF

1873-1880-1881-1882-1883-1884-1885.

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*Summary taken from the Returns of 1884 and 1885.*

	1884.	1885.	Increase.	Decrease.
<i>Roadway.</i>				
	Miles.	Miles.	Miles.	Miles.
Length of road and branches, .	2,851.743	2,859.793	8.050	-
in Massachusetts, .	1,973.708	1,981.688	7.980	-
Length of double track, .	941.627	977.087	35.460	-
in Massachusetts, .	667.889	669.639	31.750	-
Length of sidings, .	1,165.207	1,203.142	37.935	-
in Massachusetts, .	832.393	855.300	22.907	-
Total length as single track, .	4,958.577	5,040.022	81.445	-
in Massachusetts, .	3,473.990	3,536.627	62.637	-
Length of steel rails in track, .	3,121.720	3,336.476	214.756	-
Length of iron rails in track, .	1,836.857	1,703.546	-	133.311
Total miles of road operated, .	3,585.127*	3,725.297*	140.170	-
in Massachusetts, .	1,930.108*	1,935.779*	5.671	-
Railroad crossings at grade, .	40	40	-	-
over grade, .	19	19	-	-
under grade, .	19	19	-	-
Highway crossings at grade, .	2,128	2,118	-	10
protected, .	677	709	32	-
unprotected, .	1,451	1,409	-	42
<i>Assets.</i>				
Construction, . . . . .	\$176,899,373 56	\$177,392,457 66	\$493,084 10	-
Equipment, . . . . .	22,041,997 09	22,680,642 08	638,644 99	-
Lands, . . . . .	2,194,606 92	2,398,186 20	203,579 28	-
Stocks, . . . . .	6,977,283 10	7,290,133 55	312,850 45	-
Bonds, . . . . .	1,171,517 43	1,456,517 43	285,000 00	-
Other property, . . . . .	2,597,096 44	2,465,026 98	-	\$129,069 46
Total permanent investments, .	\$211,881,874 54	\$213,685,963 90	\$1,804,089 36	-
Cash, . . . . .	\$2,364,251 10	\$3,097,880 04	\$733,628 94	-
Materials and supplies, . . .	4,133,113 33	3,885,005 73	-	\$248,107 60
Sinking fund, . . . . .	2,372,525 46	2,974,738 83	602,213 37	-
Other cash assets, . . . . .	8,443,520 35	10,118,338 66	1,674,818 31	-
Total cash and cash assets, . .	\$17,313,410 24	\$20,075,963 26	\$2,762,553 02	-
Profit and loss balance (deficit),	1,363,391 24	1,336,456 47	-	\$26,934 77
Total assets as per balance-sheet,	\$230,558,676 02	\$235,098,383 63	\$4,539,707 61	-
<i>Liabilities.</i>				
Capital stock, . . . . .	\$127,668,390 27	\$128,551,658 54	\$883,268 27	-
Funded debt, . . . . .	77,625,238 50	79,714,724 18	2,089,485 68	-
Unfunded debt, . . . . .	14,127,645 49	14,067,861 12	-	\$59,784 37
Surplus, . . . . .	11,137,401 76	12,764,139 79	1,626,738 03	-
Total liabilities as per balance-sheet, . . . . .	\$230,558,676 02	\$235,098,383 63	\$4,539,707 61	-
Total number of stockholders, .	39,205	39,440	235	-
in Massachusetts, .	28,513	28,532	19	-
Stock held in Massachusetts, .	\$85,332,908 02	\$85,444,154 02	\$111,246 00	-
Persons employed, . . . . .	30,590	30,069	-	521

\* Central Mass. Railroad (43.60 miles) not in operation during the year.

*Summary taken from the Returns of 1884 and 1885.*

	1884.	1885.	Increase.	Decrease.
<i>General Exhibit for the Year.</i>				
Total income, . . . . .	\$43,119,302 70	\$44,623,350 35	\$1,504,047 65	-
Total expense, including taxes, . . . . .	30,389,465 54	29,357,967 36	-	\$1,031,498 18
Net income, . . . . .	12,729,837 16	15,265,382 99	2,535,545 83	-
Rentals, . . . . .	1,681,218 97	3,146,408 11	1,465,189 14	-
Interest accrued, . . . . .	4,729 328 56	4,767,095 88	37,767 32	-
Dividends earned, . . . . .	6,319,289 63	7,351,879 00	1,032,589 37	-
per cent., . . . . .	4.95	5.72	0.77	-
Dividends declared, . . . . .	6,535,054 92	6,551,704 15	16,649 23	-
per cent., . . . . .	5.12	5.10	-	0.02
Balance for the year, . . . . .	α 215,765 29	800,174 85	1,015,940 14	-
Surplus Sept. 30, . . . . .	9,774,010 52	11,427,683 32	1,653,672 80	-
<i>Transportation Earnings.</i>				
From local passengers, . . . . .	\$14,063,917 78	\$14,454,857 39	\$390,939 61	-
through passengers, . . . . .	5,234,755 04	5,078,966 71	-	\$156,788 33
express and extra baggage, . . . . .	1,163,684 03	1,206,175 11	42,491 08	-
mails, . . . . .	600.3 5 57	634,064 90	33,759 33	-
other sources, . . . . .	144,538 00	175,305 16	30,767 16	-
Total passenger department, . . . . .	\$21,207,200 42	\$21,549,369 27	\$342,168 85	-
From local freight, . . . . .	\$9,859,079 52	\$9,931,155 95	\$72,076 43	-
through freight, . . . . .	10,327,777 47	10,192,899 01	-	\$134,878 46
other sources, . . . . .	62,919 89	68,916 76	5,996 87	-
Total freight department, . . . . .	\$20,249,776 68	\$20,192,971 72	-	\$56,805 16
Total transportation earnings, . . . . .	41,456,977 30	41,742,340 99	\$285,363 69	-
Transportation expenses, including taxes, . . . . .	\$30,927,242 39	\$29,853,570 77	-	\$1,073,671 62
<i>Mileage, Traffic, etc.</i>				
Train miles, passenger, . . . . .	15,157,425	16,212,988	1,055,563	-
freight, . . . . .	11,282,338	11,722,667	440,329	-
Total revenue-train miles, . . . . .	26,439,763	27,935,655	1,495,892	-
Miles run by other trains, . . . . .	5,864,570	6,233,344	368,774	-
Total train miles, . . . . .	32,304,333	34,169,999	1,864,666	-
Passengers, season ticket, . . . . .	11,436,929	10,694,750	-	742,197
total number, . . . . .	66,517,265	69,603,700	3,086,435	-
local mileage, . . . . .	761,629,437	796,294,048	34,664,611	-
through mileage, . . . . .	245,506,939	245,334,025	-	172,914
total mileage, . . . . .	1,007,136,376	1,041,628,073	34,491,697	-
Freight, total tons carried, . . . . .	20,273,920	20,577,096	303,176	-
local mileage, . . . . .	358,476,644	378,992,047	20,515,403	-
through mileage, . . . . .	870,891,828	887,168,408	16,276,580	-
total mileage, . . . . .	1,229,368,472	1,266,160,455	36,791,983	-
<i>Equipment.</i>				
Locomotives, . . . . .	1,391	1,416	25	-
Passenger cars, . . . . .	1,948	1,993	45	-
Mail, baggage and express cars, . . . . .	525	509	-	16
Freight cars (basis 8 wheels), . . . . .	29,701	29,957	256	-

α Deficit.

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## Summary taken from Returns of 1873, 1880, 1881, 1882, 1883, 1884, 1885.

	1873.	1880.	1881.	1882.	1883.	1884.	1885.
Main line in Massachusetts, . . .	1,734,955	1,893,080	1,927,944	1,949,460	1,953,238	1,973,708	1,981,688
Double track in Massachusetts, . . .	436,068	454,792	480,877	539,070	587,299	667,889	699,639
Sidings in Massachusetts, . . .	443,987	696,693	739,285	768,196	799,264	832,393	855,300
Total in Massachusetts, . . .	2,615,010	3,044,565	3,148,106	3,256,725	3,339,803	3,473,990	3,536,627
Amount of capital stock, . . .	\$115,406,883 54	\$118,738,871 58	\$122,155,614 12	\$122,976,262 26	\$123,367,572 27	\$127,568,390 27	\$128,551,658 54
Amount of stock held in Mass., . . .	63,267,080 00	78,806,559 95	89,813,841 82	80,602,561 35	81,477,870 02	83,332,908 02	85,444,154 02
Number of stockholders, . . .	32,901	36,874	36,354	37,284	38,275	39,205	39,440
Stockholders in Massachusetts, . . .	23,845	27,057	26,485	27,282	27,827	28,513	28,532
Gross debt, . . .	\$45,031,862 59	\$72,841,890 36	\$79,340,124 56	\$89,251,046 03	\$91,235,835 97	\$91,752,883 99	\$93,782,585 30
Net debt, . . .	36,606,894 70	59,172,520 25	64,850,890 76	71,913,806 00	72,933,290 93	74,439,473 75	73,706,622 04
Cost of construction, . . .	\$128,181,510 69	\$152,458,105 46	\$159,664,120 10	\$163,724,377 54	\$165,824,300 96	\$176,899,373 56	\$177,392,457 66
Cost of equipment, . . .	17,861,859 47	17,263,068 72	18,795,188 80	19,410,331 13	20,122,551 63	22,041,997 09	22,680,642 08
Cost of other property, . . .	11,566,450 17	10,478,249 48	11,404,816 30	15,821,119 87	12,954,424 16	12,940,503 89	13,612,864 16
Total permanent investment, . . .	157,609,820 33	180,199,423 66	189,864,125 20	198,955,828 54	198,901,276 75	211,881,874 54	213,685,963 90
Cash and cash assets, . . .	8,424,967 89	13,669,370 11	14,489,233 80	17,337,240 03	18,302,545 04	17,313,410 24	20,075,963 26
Total property and assets, . . .	166,034,788 22	193,868,793 77	204,353,359 00	216,293,068 57	217,203,821 79	229,195,284 78	233,761,927 16
Total income from all sources, . . .	\$34,930,527 42	\$35,140,374 77	\$37,764,395 83	\$40,846,370 10	\$43,380,387 63	\$43,119,302 70	\$44,623,350 35
Total expense,* . . .	25,412,688 74	23,948,559 24	27,062,644 23	29,944,167 15	32,479,907 71	32,070,684 51	32,504,375 47
Net income, . . .	9,517,838 68	11,191,815 53	10,701,751 60	10,902,202 95	10,900,479 92	11,048,618 19	12,118,974 88
Interest accrued, . . .	1,846,783 16	3,423,752 25	3,748,292 55	4,291,222 95	4,656,085 23	4,729,328 56	4,767,095 88
Dividends earned, . . .	7,671,055 52	7,768,063 28	6,953,459 05	6,610,980 36	6,144,394 69	6,319,289 63	7,351,879 00
Percentage to capital stock, . . .	6.65	6.56	5.69	5.37	5.02	4.95	5.72
Dividends declared, . . .	7,230,456 02	5,987,718 64	6,287,866 82	6,271,139 86	6,379,721 10	6,535,054 92	6,551,704 15
Per cent., . . .	6.34	5.05	5.15	5.10	5.21	5.12	5.10
Balance for the year, . . .	440,590 50	1,780,344 64	665,592 23	339,840 50	235,326 41d	215,765 29d	800,174 85
Total surplus Sept. 30, . . .	11,109,635 89	2,288,031 83	2,857,620 32	4,065,760 28	3,600,413 55	9,774,010 52	11,427,683 32

Taxes paid, . . . . .	\$1,266,167 99	\$1,382,555 19	\$1,568,020 94	\$1,830,437 00	\$1,878,200 01	\$2,021,559 81	\$2,063,204 62
Mileage, passenger trains, . . . . .	9,212,257†	11,350,716	12,413,290	13,636,169	14,244,658	15,157,425	16,212,988
Mileage, freight trains, . . . . .	9,684,612†	9,809,975	10,398,539	10,698,126	11,392,154	11,282,338	11,722,667
Mileage, other trains, . . . . .	1,164,748	3,814,701	4,393,954	4,818,505	5,524,011	5,864,570	6,233,344
Total train mileage, . . . . .	20,061,617	24,975,392	27,205,783	29,052,800	31,150,823	32,304,333	34,168,999
Total passenger mileage, . . . . .	658,207,465	708,645,422	788,422,761	892,321,207	943,245,658	1,007,136,376	1,041,628,073
Through passenger mileage,†	194,647,972	199,053,664	219,680,579	242,970,014	240,784,477	1,245,506,939	245,334,025
Total freight mileage, . . . . .	615,769,300	959,429,750	1,080,802,796	1,130,070,652	1,220,824,418	929,368,472	1,266,160,455
Through freight mileage,†	355,433,861	649,741,938	760,209,637	777,203,347	822,282,988	870,891,828	887,168,408
Total passengers carried, . . . . .	42,398,001	45,151,152	49,834,491	55,868,694	61,530,747	66,517,265	69,603,700
Total tons of freight carried, . . . . .	12,431,188	17,221,567	17,971,072	19,061,164	20,202,881	20,273,920	20,577,096
Total season-ticket passengers, . . . . .	6,655,443§	11,623,285	12,616,987	12,674,117	12,769,420	11,436,929	10,694,750
Number persons employed, . . . . .	20,182	21,615	25,490	27,403	29,844	30,590	30,069
Locomotives, . . . . .	908	1,103	1,161	1,222	1,286	1,391	1,416
Passenger cars, . . . . .	1,243	1,512	1,568	1,658	1,790	1,948	1,993
Mail and baggage cars, . . . . .	305	403	432	463	482	525	509
Freight cars, . . . . .	16,143	21,986	24,502	26,382	28,008	29,701	29,957
Steel rails, . . . . .	630,406	1,970,780	2,134,964	2,466,203	2,774,431	3,121,730	3,336,476
Iron rails, . . . . .	2,957,227	2,276,999	2,304,306	2,109,232	1,943,138	1,836,557	1,703,546

\* Including operating expenses, taxes, and rents. † Mileage of switching engines included in these accounts for this year, hereafter included in "Mileage, other trains."

† Mileage to and from other roads.

§ In this year computed by a majority of the roads *one* passenger per day, for the other years *two* passengers per day, for time of each ticket.

d Deficit.

















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BOOKBINDING CO., INC.

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100 CAMBRIDGE STREET  
CHARLESTOWN, MASS



